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Numerous factors of the education process were analyzed statistically in relation to variables relating to social and economic change factors during the period 1930-1960 in Mexico. Major findings included the following: (1) from 1940 to 1960 general economic and social conditions became more favorable, but post-primary schooling of adults did not improve; (2) little indication was shown for differential growth indices between the several Mexican states; (3) the stability of relationships depended to a large extent on lack of an identification with the Federal state, and (4) the areas lagging behind national indices showed a larger change component over the twenty-year span. All educational variables were related to the amount of change on the social and economic indices by using multiple correlation statistical analysis. (JM)

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EDUCATION IN RELATION TO SOCIAL AND ECONOMIC CHANGE IN MEXICO

Phyllis K. Goldblatt

University of Chicago
Chicago, Illinois

June 1968

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS ii

LIST OF TABLES iv

LIST OF ILLUSTRATIONS viii

Chapter

I. INTRODUCTION 1

II. THE SOCIO-CULTURAL GEOGRAPHY OF MEXICO 43

III. EDUCATIONAL ATTAINMENTS AND THE SOCIO-ECONOMIC STRUCTURE: THE SITUATION IN 1960 111

IV. STABILITY AND CHANGE OVER TIME: 1940 AND 1960 COMPARED 146

V. LEVELS OF ADULT SCHOOLING AS INFLUENCES ON THE SCHOOLING OF YOUTH 204

VI. DETERMINANTS OF THE DIFFUSION OF PRIMARY SCHOOLING 263

VII. SUMMARY AND CONCLUSIONS 310

APPENDICES

A. GLOSSARY 328

B. CORRELATION MATRICES 353

C. PARAMETERS OF REGRESSION EQUATIONS 447

BIBLIOGRAPHY 449

LIST OF TABLES

Table Page

1. Inventory of Variables Used 29

2. Variables Constructed as Ratios or Differences of Table 1 Variables 38

3. Factors Describing Modernization, Agriculture, and Cultural Characteristics of Mexico 53

4. Correlations of Variables Describing Population Distribution 73

5. Correlations between Urbanization and Occupation Variables, 1940 and 1960 77

6. Correlations between Urbanization and Agriculture Variables 81

7. Correlations between Urbanization and Industrialization Variables 86

8. Correlations between Proportions of Males Walking Barefoot and in Agriculture and Urbanization Variables 99

9. Correlations between Urbanization Variables and Variables Relating to Transportation, Communication, and Facilities, 1960 106

10. Correlations between the Proportions of Males Walking Barefoot and in Agriculture and Transportation Variables 107

11. Correlations between Communication Variables and Characteristics of Agriculture 108

12. Distributions of Literacy Rates by Age, Sex, and Residence, 1960 115

13. Distribution of Levels of Schooling of the Adult Population by Sex, 1960 119

14. Distribution of the Proportions of Males and Females Who Were Economically Active, 1960 122

LIST OF TABLES--Continued

Table Page

15. Correlations of Marriage and Fertility Rates of Females, 1960, with Variables Relating to Education, Occupations, and Urbanization 124

16. Distributions of the Economically Active Population Within Sex and Occupation Categories, 1960 127

17. Correlations between Occupations and Variables Relating to Literacy and Schooling, 1960 129

18. Correlations of Indices of Income and Development with Variables Relating to Literacy and Schooling, 1960 134

19. Correlations of Indices of Agricultural Development with Rural Literacy Rates 136

20. Distributions of Transportation, Communication, and Cultural Traits, 1960 138

21. Correlations of Mass Media and Transportation with Literacy and Schooling, 1960 139

22. Correlations of Cultural Characteristics with Literacy Movies, Radio, and Bicycles, 1960 140

23. Correlation Coefficients for Education and Other 1960 Variables Showing the Highest Zero-order Correlations with Literacy 10+, No Schooling, and 7+ Years of Schooling 144

24. Median 1940 and 1960 Values and Intertemporal Correlations; Selected Variables 149

25. Selected 1940 Zero-order Correlations 153

26. Selected 1960 Zero-order Correlations 155

27. Correlations of Variables Measuring Change with Selected 1940 Variables and with 1960 Sex Differences in Literacy . . 161

28. Intercorrelations of Change Variables among Themselves . . . 165

29. Selected Factors with One or More High Loadings on Change Variables 168

30. Indices of Intensity of Life-time In-migration; States with Net In-migration, 1960 183

LIST OF TABLES--Continued

Table	Page
31. Extent of Out-migration and Major Destinations of Out-migrants; States with Net Out-migration, 1960	184
32. Distribution of In-migrants from States with Various Proportions of Population Engaged in Agriculture	196
33. Correlations of Male In-migration Rates with Other Variables	199
34. Comparisons of Literacy Rates by Age: Mexico and Iran . . .	213
35. Distributions of Literacy Rates: Mexico and Iran Compared	216
36. Correlations among Literacy Rates in States of Mexico and Districts of Iran	217
37. Correlations between Literacy of Youth and Levels of Adult Schooling, 1960	230
38. Factors with High Loadings on Literacy and Schooling of Youth	231
39. Distributions of Intergeneration Gains in Literacy by Age, Sex, and Residence	243
40. Correlations between Adult Levels of Schooling and Age Differences in Literacy, 1960	244
41. Correlations of Urbanization, with Time Differences in Literacy of Youth, and with School Enrollment Rates, 1930 to 1960	246
42. Distributions of Enrollment Rates, 1930 to 1960	247
43. Correlations between Enrollment of Youth and Adult Levels of Schooling	249
44. Correlations between Enrollment of Youth and Adult Literacy in Mexico and Iran	250
45. Distributions of Rural and Urban Continuation Rates, 1960 and 1942	252
46. Correlations between 1940 and 1960 Education-of-youth Variables	253
47. Intercorrelations between Schooling of Children and Middle Levels of Schooling of Adults 1930 to 1950	254

LIST OF TABLES--Continued

Table		Page
48.	Intercorrelations between Schooling of Children and Middle Levels of Schooling of Adults, 1960	256
49.	Associations between Age-grade Patterns and Selected Indicators of Lead and Lag in Modernization	259
50.	Illustrative Correlations of Enrollment Rates and of Child Employment with Selected Variables, 1960	273
51.	Illustrative Correlations of Enrollment Rates and Child Literacy with Selected Variables, 1930 to 1940	282
52.	Multiple Regression Analysis, Set 1 Dependent Variable: Enrollment Rate, 1937 T	288
53.	Multiple Regression Analysis, Set 2 Dependent Variable: Enrollment Rate, 1960 T	294
54.	Multiple Regression Analysis, Set 3 Dependent Variable: Urban Enrollment, 1960	295
55.	Multiple Regression Analysis, Set 4 Dependent Variable: Rural Enrollment, 1960	304
56.	Federal District Enrollment Prediction Tests	306
57.	Correlation Matrix: Population, Transportation, Utilities and Communication Variables against Themselves, Each Other, and Selected Other Variables	353
58.	Correlation Matrix: Occupational and Economic Characteristics against Population, Transportation, Utility and Communication, and Selected Other Variables . .	363
59.	Correlation Matrix: Cultural Attributes by Demographic, Transportation, Utility and Communication Variables; by Occupational and Economic Characteristics; by Literacy Rates, Youth Employment, and Enrollment; and Population Walking Barefoot Variables against Themselves	370

LIST OF TABLES--Continued

Table | Page

60. Correlation Matrix: Occupational and Economic Characteristics against Themselves, Each Other, against Adult Educational Attainments and against Six Other Selected Variables 378

61. Correlation Matrix: Education Variables against Each Other: Literacy of Population and Differences in Literacy by Age, Sex, and Residence; Adult Levels of Schooling; Enrollment Rates by Year, Residence, Income and Occupation; Progress in School--Continuation Rates, Age-Grade Levels, Pass Rates, and School Facilities 390

62. Correlation Matrix: Education Variables against Themselves, Literacy Rates, Adult Levels of Schooling, Secondary Schooling, Primary School Enrollments, Primary School Continuation Rates and Selected Variables Showing School Retention 404

63. Correlation Matrix of *Education Variables: Literacy*, Adult Levels of Schooling, Primary School Enrollments, and Progress in School against Non-Education Variables: Population Distribution and Change, Transportation, Utility and Communication Facilities, Occupational and Economic, and Cultural Characteristics 421

64. Parameters of Regression Equations 447

LIST OF ILLUSTRATIONS

Figure Page

1. Economic Indicators for Mexico and for Argentina 46

2. Map of Elevations, Mexico 64

3. States and Major Cities of Mexico 66

4. Matrix D, Factor 1 69

5. Population Distribution and City Size, 1960 72

6. Industrial Concentrations and Locations of Selected Basic Industries I, 1957 89

7. Industrial Concentrations and Locations of Selected Basic Industries II, 1957 91

8. Industrial Concentrations and Locations of Selected Vital Industries I, 1957 93

9. Industrial Concentrations and Locations of Selected Vital Industries II, 1957 95

10. The Railway Network and Industrial Concentrations 102

11. The Highway System 105

12. Scattergram of Proportions of Adult Males 30+ Years with 7+ Years of Schooling by Proportions of Economically Active Males in Clerical Occupations, 1960 132

13. Scattergram of Percentages of Males Barefoot, 1960 and Percentages of Females Age 40 and Over Literate, 1960 . . . 142

14. Matrix D, Factor 7 178

15. Matrix D, Factor 2 181

16. Origins of In-migrants to Central and Southern States (Born in Other States), 1960 187

17. Origins of In-migrants to Northern States (Born in Other States), 1960 189

LIST OF ILLUSTRATIONS--Continued

Figure — Page

18. Destinations of Out-migrants Born in Southern States, 1960 191

19. Destinations of Out-migrants Born in North and North Pacific States 193

20. Destinations of Out-migrants Born in Central States, 1960 195

21. Interpersonal Communication Network 208

22. Scattergram of Percentages of Literate 10-14 Year Olds, Males by Females, 1960 220

23. Scattergram of Percentages of Rural Literate 10-14 Year Olds, Males by Females, 1960 222

24. Scattergram of Percentages of Literate Males 40+, 1940 by 1960 224

25. Scattergram of Percentages of Literate Males 40+ Years by 10-14 Years, 1960 226

26. Scattergram of Percentages of Literate Females 40+ Years by 10-14 Years, 1960 228

27. Matrix C, Factor 1 240

28. Matrix C, Factor 3 262

29. Enrollment Rates of 6-14 Year Olds, Males plus Females, 1960 268

30. Urban Enrollment Rates of 6-14 Year Olds, 1960 270

31. Rural Enrollment Rates of 6-14 Year Olds, 1960 272

32. Information and Communication Channels 276

33. Decision Model 278

34. Matrix A, Factor 11 303

CHAPTER I

INTRODUCTION

A problem shared by most of the developing countries is that of welding disparate, locally-organized sub-societies into a unified nation. One concomitant of development is the drawing into a national network of economic and political participation of many formerly autonomous, self-sufficient groups. This study is concerned with the socio-economic ecology of human-resource development, its distribution and association with other aspects of development of modernization as manifested in adult populations. It deals also with the diffusion of modernizing influences through the spread of literacy and schooling among the members of the rising generation. Conceptually the study is grounded primarily in communication theory, primarily as delineated by Torsten Hägerstrand's constructs of "information fields" and "resistance" and in Durkheim's dual concept of social and physical density. Thus, although the data are for geographic units, the relevant "space" is communication space and the geographic data are interpreted accordingly.

Mexico is used as an example. Previous studies have described the large proportion of the Mexican population living a life marginal to national development, the vast disparities among regions in degree of modernization, and the advance of the key cities over the rest of the nation. Casanova identifies the "marginal" population by literacy and by habits of food and dress. Certain foods and ways of dress are customarily used by indigenous people; others, as the wearing of shoes, require the adoption of a new style of life. Intercorrelations among these variables of food and dress show that clusters of them (e.g., eating maize, walking barefoot, illiteracy) are highly associated with the proportion of the population living in rural areas. In spite of the fact that Mexico has undergone a genuine social revolution and has experienced industrialization and urbanization, marginal populations persist.[1]

Yates, in his study of regional development, contrasts the accelerated growth of favored areas and the continuing gap between prosperous and poor areas.[2] In Education and National Development, Myers emphasizes the heavy concentration of development of resources in a few industrial areas only.[3] The emphasis in this study is in identifying the educational components of a development nexus so that development potential can be spotted outside of the clearly advanced areas.

These studies implicitly suggest barriers in communication, i.e., in the flow of influence from the modernized to the traditional segments of the population. They suggest also the need to study how peripheral groups become part of national life, in part by the diffusion of innovations. Innovations may be of diverse kinds, little and big. They include not only the use of new objects (as wheat bread or bicycles) but also new institutions or agencies such as schools--or even acquisition of literacy without schooling among heretofore illiterate populations. The ways in which innovations are transmitted through the population and the responses of the recipients to new ideas set the conditions for social change.

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[1] Pablo Gonzalez Casanova, "Sociedad plural y desarrollo:el case de Mexico," America Latina, V, No. 4 (Octubro-Dezembro de 1962), 31-51.

[2] Paul Lamartine Yates, El Desarrollo Regional de Mexico (Mexico, D.F.: Banco de Mexico, S.A. Departamento de Investiaciones Industriales, 1962).

[3] Charles Nash Myers, Education and National Development in Mexico (Princeton, New Jersey: Princeton University, Industrial Relations Section, 1965).

Several of the studies in Mexico have focused on communication links studying the nature of the contacts which reduce the isolation of rural people. Kunkel, in a study of several communities, found economic dependence (above the level of differentiation of activities within communities) to be present in almost all the cases where new ways had penetrated. He concluded that economic links are a precondition for broader social changes.[1] The Youngs and Moore also explored the conditions under which change occurs. They asked why people leave farming for industrial work. The Youngs found that movement toward industrial work was a function of associations with people who were already involved in the urban occupational structure.[2] The foregoing works used the community as the unit of observation in studying under what conditions a visible commitment to new ideas comes about, why people change their occupation, or why they accept new social customs.

As one aspect of a larger study, Glick identified the most developed areas in Mexico and classified the remaining states in their locational relationship to these centers. Here development was seen as a function of location, of accessibility to a source of change.[1] It was a link through economic activity to a base outside the community that was part of the process of change.

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[1] J. H. Kunkel, "Economic Autonomy and Social Change in Mexican Villages," Economic Development and Cultural Change, X, No. 1 (October, 1961), 51-63.

[2] Frank and Ruth Young, "Individual Commitment to Industrialization in Rural Mexico" (unpublished paper). Of the two villages in Moore's investigation, it was the village that was more physically isolated, had poorer land, and was more traditionally oriented on various indexes, that sent out the greater proportion of factory workers. Moore argued that it was poverty and the lack of alternatives that pushed people off the land in one village and the relative prosperity and benefits of land reform that kept villagers in the other village. He concluded that while factory workers were most readily recruited from non-agricultural occupations, it was disadvantaged persons in agriculture who would make the move, while those in more developed farm areas might not. While poverty might be a factor in recruitment of unskilled labor, at higher occupational levels other sets of complex factors as rewards in goods and services, prestige and esteem were operative. Within this framework there is room for the interpretation that the communication network between factory workers and the poorer village reinforced the mobility pattern and helped overcome the inertia of the villagers. Wilbert E. Moore, Industrialization and Labor (Ithaca: Cornell University Press, 1951).

What is needed is a panoramic view of the society; of the structural correlates of social and economic integration; of the movement of ideas and people as mediators between the developed and the traditional areas. The ecological perspective lends itself to this kind of analysis. We may look upon society as an interaction among the physical environment, forms of organization for sustenance, technology, and population concentration and increase.[2] The reduction of isolation presupposes a source of change; it requires channels of communication; and qualities of the recipients influence their acceptance or rejection of change. The innovation itself may be one that functions as a mediator between the traditional and the modern ways of life. The diffusion of an innovation among a population is enhanced or constrained by the environment as well as by circumstances of time and space. The problem then is one of discovering the ways in which an innovation is diffused among a population, and secondly how this diffusion fosters other social changes. Evidently schooling is of key interest in both respects.

Educational systems have in many cases been aligned with forces preserving the traditional culture and helped to perpetuate the prerogatives of established elites. However, the diffusion of schooling inevitably supports and normally fosters modernization. Schooling enables its adopters to acquire new skills, to qualify for a wider range of occupations, or to apply technological improvements in their activities. Where traditional cultures and languages differ from the dominant language of the better educated and more economically advanced sectors of a population, the diffusion of education in that language fosters national unity and the integration of heretofore isolated groups into the central stream of on-going national life. The spatial patterning of educational attainments among the adult members of a population is thus a clue both to spatial patterning of socio-economic development and to the likely effectiveness of the networks for communication of information and attitudes conducive to the diffusion of modernization. The first four chapters of this study delineates those patterns and their association with other factors in and manifestations of socio-economic development.

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[1] Milton Glick, "The Impact of Economic Development on the Returns to Labor in Agriculture in Mexico" (unpublished Ph.D. dissertation, Department of Economics, University of Chicago, 1963), p. 34.

[2] Otis Dudley Duncan and Leo F. Schnore, "Cultural, Behavioral and Ecological Perspectives in the Study of Social Organization," American Journal of Sociology, Vol. LXV (1959-1960).

Primary schooling in developing countries may also be viewed as a new trait or innovation, the spread of which is to be explained. The problem then is to trace the patterns in which education is diffused through the society and to interpret them. This is the principal concern of Chapters V and VI, where attention is centered upon school enrollments, continuation rates, and age-grade characteristics of children. Whereas in the first part of this study, the relationships are such as to make distinctions between cause and effect exceedingly problematic, there can be no ambiguity about taking child literacy and enrollment rates as dependent variables, to be explained by other characteristics of the society (including educational attainments of adults).

The ecological point of view that is used throughout the study provides a framework by means of which it is possible to synthesize the analysis of interrelationships among a wide diversity of statistical data. But an explanatory development of that framework, and its use for analysis of communication and diffusion of education and economic change, is needed.

Relations of Occupations and Technology to Development

The criteria for choosing variables were derived from Durkheim's discussion of social morphology. In his Division of Labor in Society, Durkheim defines two types of social organization. One is a segmented mode of organization characteristic of small and isolated or autonomous aggregates in which little control has been achieved over the local environment. A second type of organization (embracing modern industrial society) rests on an intricate interdependence of specialized parts; this differentiation is due to the division of labor and exchange of goods and services. The self-sufficient segments are broken down within communities and between societies and isolation among units is reduced.[1]

In an ecological analysis, the description of the economic organization of the society is one of the key indexes to the shift from a type of organization in which all the members engage in subsistence activities to one based on an interchange of goods and services. One meaning of development is this transformation of the self-sufficient segments of the society into differentiated, integrated, and interacting units. Part of social change is an adjustment to technological change. Adjustment involves relating population to job opportunities, and where these are not locally available, migration becomes a means of achieving an adjustment.

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[1] Emile Durkheim, The Division of Labor in Society, trans. George Simpson (New York: The Free Press, 1933). Discussion also in, Leo J. Schnore, The Urban Scene (New York: The Free Press, 1933), pp. 3-41.

Social and Physical Density

A minimum population size and density are necessary to heterogeneous and complex social units. However, population concentration alone does not insure weakening of isolation among parts. Durkheim noted that "segmentation" or lack of marked differentiation in a society may persist in spite of high physical density if the contacts among social parts are minimal. He introduced the concept of "moral" or "dynamic" density: as labor becomes more specialized, there are more individuals sufficiently in contact to be able to act and react upon one another. Progress in the division of labor is in direct ratio to moral density. Social (or moral) density comes about by diminishing gaps separating social segments or by multiplying intra-social relations. He then suggests that dynamic density diminishes the distance between individuals by the concentration of population, especially in cities (physical density) and by development of transportation and communication. Reducing the gaps separating social segments increases the dynamic density of the society. Favorable topographic conditions and technological innovations facilitate movement, reduce barriers of distance, and broaden interdependence.

The Swedish geographer Hägerstrand developed a method for tracing the spatial diffusion of an innovation that offers a basis for prediction of the spatial flow. He found the probability of a new adoption of a particular innovation to be highest in the vicinity of an earlier adoption and to decrease with distance. He described the time pattern of change as one of "deferred accleration," by which he meant that after every new adoption the probability increased that another would occur until a state of saturation is reached. When an adoption occurs at some distance from the initial center, a density of adoption develops in the new area which becomes a secondary center. He suggested that a hierarchy of centers existed, each one dominating subcenters and surrounding areas of its own. Normally adoptions jump from one of these centers to another long before the local diffusion from any center has reached maximum pace of adoption.

Hägerstrand provided in his model for the obvious gaps in the spread of an innovation by emphasizing private communication networks, described in the concepts of "information fields" and of "resistance." The contact or exchange of information on a person-to-person basis is determined by the communication connections of groups of people (as measured, e.g., by telephone-call distribution and migration). Some people have links extending over national boundaries, some on a regional level, but the majority maintain connections on a local level only.[1] In other words, various sub-populations participate in distinctive, though partially overlapping, information fields. The nature and intensity of these fields and the extent of their overlap are important aspects of social organization that facilitate or dampen socio-economic change.

Hägerstrand found a stability to exist in rural population movements because of the flow of information through private channels, the migration movements reinforcing the spatial patterning of those channels. The telephone-call distribution and the migration field of a rural area both followed a pattern of decreasing contact with increasing distance. However, the adoption of any particular innovation is not determined by interpersonal contacts or "tellings" alone. The various factors that may foster or impede adoption are what Hägerstrand calls "resistance." Resistances may reflect objective conditions (e.g., a new fertilizer may produce results only in certain soils or may require more water than is available in some areas), but resistances may also reflect attitudes that more readily accept one change and resist another. Whatever the determinants of resistances, their thresholds will vary among individuals. Time lags in adoptions are the expression of resistances; some innovations diffuse with great rapidity, others only slowly as complementary factors become available or traditional attitudes are modified.

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[1] Torsten Hägerstrand, "Quantitative Techniques for Analysis of the Spread of Information and Technology," Education and Economic Development, ed. C. Arnold Anderson and Mary Jean Bowman (Chicago: Aldine Publishing Co., 1963), pp. 244-80.

Hägerstrand suggests (based on his findings for Sweden) in considering means for planned social change that the communication channels have to be defined first. However, he points out that it is the resistance side of the model where susceptibility to change might be most readily altered. Educational factors operate both in the "information field" side, suggesting more extensive (and distant) communication links among populations with more education, and on the "resistance" side, since education is both a prerequisite for utilizing more complicated innovations and a precipitant of attitudinal transformations.

Urbanization, Communication, and Development

Hägerstrand's formulation of the diffusion process does not rely upon an urban-rural dichotomy. While he speaks of parent localities, and a hierarchy of centers with gradients of influence, the role of cities or the process of urbanization is not an explicit part of his analysis. In Durkheim, on the other hand, the concentration of the population in cities is part of the condition under which contacts among diverse social units can be intensified. In Durkheim's formulation, social interaction leads to differentiation through competition; the greater the social density, the greater the competition. One means of resolving competition is through occupational diversity, and through territorial differentiation.

The definition of urban, even when most simply defined as population concentrations over 2,500 people, does not represent a genuine contrast to a rural locality. The folkways that rural migrants bring to the city may remain essentially intact. Ties among former villagers living in the city may be stronger to each other and to kin back home than to diverse groups living in the city, thus minimizing interaction. The metropolitan area may absorb outlying villages without integrating the residents into the urban economy or society. A rural center of 1,500 population may function as a market town for a much larger farm population and have ties to the regional and national economy. By the same token, a center of 10,000 population might be largely supported by subsistence agriculture with only a slight proportion of its population in specialized occupations, and having a minimum of outside contacts.

In general, however, industrialization is most likely to take place in or near centers of population, close to the potential labor force and to the potential markets, and industrialization will in turn reinforce these concentrations. In Mexico, industrial concentrations are found in a few urban centers, there is an uneven distribution of modernization force.

An important concept in diffusion studies is the gradients of influence from the city to its hinterlands. Ideally as industrialization proceeds, city and village become increasingly interdependent: the city relies on agricultural products and sends finished goods to the village. The intensity of this interaction between urban centers and environs decreases with distance. This "ideal" pattern is not always found; rural villages are sometimes "surrounded by a wall," apparently impervious to change. The communication system may be fragmented as it extends across space. This differentiation between the rural and urban communication system is mentioned in Pye: in varying degrees one system is based upon modern technology, is urban centered, and reaches the more

Westernized segments of the population. There is a separate complex network that conforms in varying degrees to the traditional system, which follows patterns of social and communal life. The urban-based communication process may penetrate into the villages only in an erratic form.[1]

The extension of transportation and communication systems reduces the dependence of the city on its environs and enables urban centers to seek supplies and markets at a distance. The mass media may bring new ideas to the villages directly from a few communication centers, circumventing intervening cities. Just as there is a separation between rural and urban communication systems, there is a difference between mass-media and inter-person channels of communication.

In Hägerstrand's theory the by-passing of contiguous villages for centers further on is accounted for by channels of interpersonal communication. He finds that these channels have their roots in history--and remain essentially the same from generation to generation.[2] Some small communities may have contacts mainly with urban centers while others may be part of an inter-village system of communication.

In spite of the shortcomings of the rural-urban dimension in a study of diffusion and economic development, there is justification for using these categories. Most obviously, the rural-urban distinction facilitates the use of available data. In the analysis of correlations, the clustering of traits around specific urban or rural variables allows for variations within the urban or rural framework. Thus some rural qualities may be associated with modernization while other rural qualities describe backward areas. In Chapter II, there is a discussion of the ways in which urbanization variables relate to other aspects of modernization, including the rural sector. At the same time association between rural and urban aspects of the same variable point out the extent of interaction.

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[1] Lucien Pye, Communication and Political Development (Princeton: Princeton University Press, 1963), p. 26.

[2] Hägerstrand, op. cit., pp. 262-64.

The Data

The units of observation in the present study are the states of Mexico. The variables are mainly characteristics of the populations of these states: as a whole or classified as urban or rural, by age, or by sex. Other variables include indexes of infra-structure development (road and railroad networks), of facilities or amenities in the community (as libraries, movies), or facilities in homes (as running water, beds).

It would have been desirable to have information by units smaller than states in order to trace more closely the relationships between population centers and their spheres of influence in the distribution of schooling and of non-educational characteristics. A preliminary scrutiny of data for municipios (equivalent to counties) revealed that many of the more interesting variables (especially pertaining to education) were not available for these small units. The labor of digging out the data would be prodigious, and, in view of the lack of some critical variables, hardly worth while. Without a prior overview, it was hard to make a sound choice of areas in which to study municipios. They had to be contiguous, since it would have been desirable to trace the interaction of population centers and their surrounding areas through the study of selected characteristics of the population, the economy, and the educational system.

The data used pertain to entire states, but wherever possible rural and urban portions are distinguished, thus partially offsetting the disadvantage of working with large geographic units. Also, one of the most relevant questions is the extent to which rural and urban areas close to each other partake of each others' traits. For similar reasons data are divided by sex wherever possible. An important question is how far differences among states in female participation in education or in the economy parallel interstate differences for males, and where sex differences tend to be large or small.

The main sources of data are the national population-census reports from 1930, 1940, 1950, and 1960 with emphasis in the analysis on 1940 and 1960. Industrial and agricultural censuses were used for supplementary data, as were other government publications: the Anuario Estadistico de los Estados Unidos Mexicanos, the Estados Unidos Mexicanos Compendio Estadistico, and special reports. Four hundred variables were selected for each of the thirty-one states. These are listed in Tables 1 and 2; where they are also given identifying numbers. While some of the categories may appear illogical, this was unavoidable because of census changes at each enumeration. (The problems of comparability will be discussed later.) Variables listed in Table 2 are all differences of ratios, derived from other variables.

The first set of variables listed in Table 1 refers to educational attainments in the indicated years for particular residence, age, and sex categories of each state. These data are the basis for the analysis of socio-economic trait clusters and processes of change. The educational data for adults are also among the predictor variables in Chapters II and IV. The second set of variables are concerned with school enrollments, continuation rates, and related aspects of the education of children and youth. Further comment on these variables will be deferred.

The demographic variables, which make up the third set in Table 1, call for special comment here. Population density (persons per square mile) is the first of these. In some parts of Mexico high density reflects traditional settled peasant agrarianism, rather than modern industrialization emanating from major centers, but the agriculturally most advanced states of the North have sparse rural populations. Furthermore, mountainous terrain in central Mexico can reduce average densities even though settlement patterns may be concentrated, whether in large or small towns. The interpretation of density data across states at any given time requires that characteristics of agriculture be taken into account; such data aid also in the interpretation of differential changes in density over time. For these and other reasons, the density variable had in itself only limited value.

Migration figures can trace sweeping patterns of population redistribution over successive decades. Urban growth has resulted from and stimulated migration, and rates of movements point out areas where opportunities have been perceived to be good (and have been so in fact), though at any given time migration responses may be out of step with growth of job opportunities. Migration patterns also distinguish older central cities with slackening drawing power from centers with escalating growth and in-migration rates. (The migration rates are proportions of the resident population who were born elsewhere.) Clues to industrial expansion and agricultural development can be derived from observations of states attracting high proportions of migrants. Also, migration data provide clues as to where we may expect urban pockets of unintegrated newcomers to be large.

Two urbanization variables were available: the proportion of the population living in towns of 2,500 or more (reported for all years) and proportions living in cities of 50,000 or more (reported for 1960 only). The two measures have somewhat different implications. There may be less urbanization on the first measure in State A than in State B, yet more people living in large cities in State B. The factors in the rise and growth of large cities differ from those contributing to "urbanization" under the census definition of proportions living in towns of 2,500 and over. Larger cities are necessary for development; they serve as prime nodes in the communication nexus; they typically are the first to pick up and transmit innovative ideas and practices, to each other and to their respective hinterlands. And the larger cities support a big enough pool of knowledgeable and alert men to provide cross-stimulation on the forefront of change. Cities are the seed beds in which adaptation to new ways, new technologies, new consumption patterns, and new social institutions are achieved.

However the degree of urbanization is measured, urbanization and industrialization are by no means synonymous: towns and cities have preceded industrial development; industrial establishments may be located outside of major cities. Taking the census definition at 2,500 (which is used usually), this is particularly obvious. In some areas, a village of 2,500 people may be a community of farmers who till outlying fields, whereas in other areas it may be a service center for a scattered farm population; but in neither case is industrialization involved. A town as large as 10,000 may still have many farmers in its population and very little processing except the traditional home crafts. There is no clear connection between proportions of males in agriculture in a state, which is probably the best measure of rurality, and proportions of the population residing in places of under 2,500.

Although the data used do not permit a direct, detailed tracing out of inter-city, city-town, or inter-town communication networks within the various states, a word is in order at this point concerning hierarchies of places in information fields, and their possible relation to size of place. It cannot be assumed that the parent locality for the initiation of an innovation or the first centers in which it will appear or to which it will move is always the largest city, or that transmission of information and innovation follows an urban-size hierarchy. Indeed, as Hägerstrand has demonstrated, we must look, among other things, at what the nature of an innovation is and to what populations it would be most relevant. On the other hand, there can be little doubt that people living in the larger country towns are typically exposed more rapidly and to a wider range of information and ideas than are those dwelling in smaller places. Myers has pointed out that people engaged in non-agricultural pursuits living in villages of less than 10,000 people are denied benefits that accrue to farmers who dwell in larger towns. Furthermore, the high labor-force participation rates in small villages can indicate concomitantly high opportunity costs of schooling, especially when those costs are viewed in relation to total family income.[1] Larger towns, even when they are still only at a 10,000 level, permit a greater diversity of job experience. Lipset, in a study of why men leave farms for factory work, found that the size of the community of orientation was important in predicting non-manual job placement, holding education constant.[2]

The concept of "urban primacy" and its measurement may be important on a national scale, but it is a highly ambiguous concept when applied to a state within a nation. The variables relating to the role of the capital city within the urban setting of each state were included primarily with the idea that they might pick up distinctive characteristics of urban functions as among the states. At one extreme, if the capital city is small, is the largest city in the state, and accounts for a large fraction of the urban population, we may expect that it will be essentially an administrative and farm-service and marketing center. At the other extreme, a large capital city that nevertheless accounts for a not-so-large proportion of the total urban population of the state would presumably indicate a high level of economic development that was not dependent upon government employment. However, for reasons some of which have been indicated in preceding comments concerning "urban" places in Mexico, these variables were not as informative as had been anticipated; they definitely tell much less about Mexico than they told about Iran in Fattahipour's study of that country.[1]

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[1] Myers, op. cit., p. 17.

[2] This study was discussed in Young and Young, op. cit., p. 1.

One of the important questions about urbanization and development is the nature of the links between the rural environment and urban progress. Indirectly the data supply some insights by the comparisons of patterns of rural and urban change and the conditions under which rural advance is associated with urban progress.

Glick, in a study of economic development and agriculture in Mexico, devised a measure of urban orientation. States included in this category were those which were wholly or largely within 200 kilometers of an urban center of 100,000 or more people in 1950. Farm labor in 1930 showed greater productivity in the urban-oriented group, but the difference was not large, and contrary to expectations farm labor productivity in non-urban states surpassed that in the urban-oriented group in 1950. (Glick explained this by saying that the rate of increase between 1930 and 1950 was greatest for non-urban states.) The level of productivity of farm labor (when correlated with the individual items in an index of development) was related to the level of non-farm earnings per capita, to value added by manufacturing per capita, and to total manufacturing output per capita--but no significant relationship with population or labor force criteria was revealed. He concluded that "the lack of politive relationships between farm labor productivity levels and changes on the one hand, and population and labor force characteristics, on the other, suggests that urbanization may be a necessary but not a sufficient condition for economic development."[1]

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[1] Ahmad Fattahipour Fard, "Educational Diffusion and the Modernization of an Ancient Civilization Iran" (unpublished Ph.D. dissertation, Department of Education, University of Chicago, 1963).

Yates, in his study of regional development in Mexico, found that states having high agricultural productivity were those with high levels of "industrialization" measured by industrial worth per capita, not by occupational characteristics of the population or location in urban centers. Yates recorded only the states most industrialized and those least industrialized; including the full range and their associations on several measures of development might yield different results. He did not measure urbanization except to point out the prodigious development of the Federal District in relation to the rest of the country and to mention the concentration of industry in a few municipios in the northern states.[2]

Modernization necessarily influences indigenous marriage and family patterns (Table 1, Group 4). In societies that are urbanized and western in orientation, marriage takes place later and families are likely to be smaller. Women are freer to participate in associations outside of the home. The relevance of "females age 20-24 who are single" and the rough fertility measures used in the study is two-fold. One is to see in what ways age at marriage and size of families are associated with the participation of women outside of the home. This would be manifested in wider contacts than the village, such as through occupations or in the adoption of an "urban style of life." The other questions concern the effect of fertility and women's literacy and schooling upon the literacy and schooling of youth. With early marriage and large families, the efforts of women will be consumed in daily chores of subsistence and contacts outside of the village or receptiveness to new ideas will be minimal. If the women are illiterate or unable to speak Spanish, they may be a dragging "resistance" hindering the diffusion of schooling among youth. When women are literate or schooled, they are more likely to encourage schooling for their children, even when opportunities for child employment abound.

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[1] Glick, op. cit., p. 34.

[2] Yates, op. cit., pp. 19 ff.

The interpretation of rural-urban differences in fertility is equivocal, however, for many reasons. The proportions of women in the child-bearing age may be higher than in urban areas, or there may be a higher ratio of males to females. The mortality rate of infants may be higher in rural areas. There may be a heavy migration of rural families to urban centers. In a Catholic country large families do not differentiate the modern from the indigenous population since families in higher income brackets may have many children and employ ample domestic help to care for them.

Fattahipour found Iranian women to have little overall influence in the socio-economic changes that he was investigating, but he stressed that development was drawing them into the modern sector.[1] The traditional role of the Mexican women in rural areas is a secondary one, confined to the household, passing on the indigenous culture from one generation to the next. The analysis of family size and age of marriage is designed to define the characteristics of females who are becoming part of the larger society.

In many parts of Mexico, ties to ancient customs and traditions are strong. Traditionalism is found not only in the remote and inaccessible corners of the country but also adjacent to some of the most modern centers--as in central Mexico. There are several interpretations of a high adherence to native ways. A large proportion of the population walking barefoot, sleeping on the floor, or eating tortillas in place of bread may be interpreted as "poverty." On the other hand, regardless of income, to a farmer living in a warm climate there may seem to be no need for shoes and no special status given to those who have them. Certain traits that appear with greater intensity in cities--defined as an "urban life style"--are different from those predominating in rural areas. The former are similar to practices in modern industrial societies elsewhere. For most purposes, in this study the wearing of shoes, eating wheat bread, and sleeping on a bed will be interpreted as indicating an urban orientation.

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[1] Fattahipour-Fard, op. cit.

Geographic patterns in the occupational make-up of the population (variables in Set 5 of Table 1) are important both in themselves and in their relationships to many other traits. For example, how closely are occupational distributions and adult educational attainments correlated? How are the economic activities of parents related to the education of children? What is the association between urbanization and the proportions of the population in various occupations, and what shifts in the distribution among occupations are taking place over time and where? It is safe to assume that certain occupations require at least the skills of literacy, and some occupations require or give scope for application of high levels of technical knowledge. The visibility of jobs requiring education may attract migrants having qualifications and may be an incentive for local youth who see around them the evidence that education can be a road to success.

The variables in Sections 6 and 7 of Table 1 describe the characteristics of agriculture and of manufacturing as industries rather than as occupations. There will be a preliminary discussion on these points in the next chapter, so it will be noted only that the variables included identify points of change in the agricultural system: mechanization, position in the landholding system, agricultural income and productivity. The positions distinguished in the agricultural occupation system are laborers (people who do manual work for a salary or a daily wage) and proprietors (those who exploit their own economic enterprise but employ no help). The *ejido* farmers are members of agrarian communities that possess and use land at least in part cooperatively. There are both collective and individual ejidos, but the overwhelming majority the crop lands are worked individually while pastures and woodlands are shared.[1]

The presence and expansion of manufacturing is a basic feature of modernization, yet manufacturing establishments may have negligible impact on their surroundings. The variables used were selected to identify those qualities of manufacturing that are part of development. A high percentage of females among employees in manufacturing may indicate a cottage industry where women bring work to their homes. The variable referring to payrolls per month as a ratio to the number employed includes only industrial establishments where the annual worth of production was higher than $10,000. The variables referring to income in manufacturing under or above a stated amount consists of those people reporting income from such work in the month of May, 1960; the denominator is the number of people in manufacturing who stated their income.

The data on roads and railroads (Table 1, Group 8) show the ratios of route length to square kilometers of land and to population. Paved roads indicate accessibility of travel. However, in general, the data on roads and railroads appeared in highly irregular patterns and caution was used in interpreting them. The variables labeled "useable roads" in Table 1 are equivalent to those with the letter B in the rest of the study, referring to the 1940 category of "traversible" roads and used to compare with paved roads.

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[1] An *ejiditario* is a farmer who acquired land through the land reforms; he can pass it on to only one heir; the land lapses to the state if not farmed for two years. In the 1960 census, *ejiditarios* were called "proprietors."

Glick's Index of Development is a composite of the following variables: (1) percentage of economically active in manufacturing, 1950; (2) percentage of economically active in non-agriculture, 1950; (3) percentage of population urban (in towns of 2,500+), 1950; (4) percentage of population in cities of 10,000+ in 1950; (5) value added by manufacturing per capita of the total population, 1950; (6) value of manufacturing production per capita of the total population, 1950; (7) average earnings of all personnel in manufacturing, 1950. These were combined by ranking the thirty-two states and territories for each item and summing the numerical value of the rank position for each state (those with smaller sums were classed as developed).[1] Electricity consumption per capita was included among the variables for several reasons; it permits standardized comparisons among states and over time and is a measure of modernization in homes as well as for public works and industry.

In Table 2 are listed variables selected for purposes of measuring changes over time, and differentials by sex and by degree of rural-urban contrast. Variables describing change were in the form of differences or a ratio. Differences between generations in literacy can be interpreted in several ways: differences were specified between the literacy of youth (15-19 years old) and middle-aged (40-49 years old), or between the middle-aged and aged (over 60 years). When differences were large, literacy in one generation was diffusing rapidly. Where differences were small, there was either a legacy of high literacy rates from one generation to the other or a backward area with little progress. These differences included distinctions of males and females and of rural and urban areas. Large differences between males and females or a high ratio of males to females, who had acquired a "progressive" trait, was indicative of a backward area. Where females matched males in the achievement of literacy (or some other trait) or showed signs of catching up, the area was "making progress." One set of literacy differences was based on percentages of youth literate in 1940 minus the percentage in 1930 and another on 1960 minus 1940 rates. In general, areas which made the greatest gains in recent decades were those which had the farthest to go or had been the most backward initially.

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[1] Glick, op. cit., p. 32.

Group 3 includes a variable designed to distinguish recency of urbanization: the proportions of the population living in urban centers in 1960 minus 1950 divided by the proportions living in urban centers 1960 minus 1940. In Group 4 sex contrasts and changes over time in the proportions of the population with the indicated culture traits signal the pace and incidence of trends toward cultural modernization.

Variables measuring the differences between years in the distribution of the economically active in the labor force and changes in the agricultural structure and in agricultural productivity were listed in Groups 5 and 6. Group 7 includes variables measuring changes in salaries in manufacturing, and Group 8 lists variables showing changes in communication, transport, and utility facilities.

Evaluation of data

All census enumeration is subject to errors of collection and tabulation. As a country continues to utilize data collected, it revises and improves procedures. Myers has this to say about the Mexican censuses:

> The reliability of Mexican statistics depends very much on the date and manner of their collection. The largest single body of data is found in the national census taken in 1895, again in 1900, and every ten years thereafter. Unfortunately, most of the data compiled before 1940 are extremely unreliable. The early compilations are under-enumerated, and the census of 1921, taken so soon after a period of revolutionary upheaval, is barely usable. The census

> of 1930 is somewhat better but still cannot be used with any real confidence. After 1940, the data are more reliable, but still subject to problems of under-enumeration and to the perpetuation, for the sake of consistency, or earlier inaccuracies.
>
> Other statistical compilations follow the same pattern but are generally less reliable at each interval because of decentralized collection procedures. Over the years individual ministries have compiled data for their own purposes, and levels of accuracy and comparability have suffered accordingly. In many instances, the inadequately explained sampling procedures which have been used cast considerable doubt on the validity of the data constructed from them. Recently there has been some improvement, and a few ministries and states are now able to supply relatively accurate information. Unfortunately, some of the educational statistics are still among the least reliable because of the inadequacy of student accounting.[1]

However, errors will decrease rather than increase the computed correlations.

Throughout the study, checks on the reliability of the statistics were made on each of the four hundred variables in the following ways:

1. Watching for qualifying comments and explanations accompanying the source.
2. Totaling columns of percentages for each state listed and comparing the total with national figures.
3. Comparing figures taken from two sources; as enrollment of males plus females 6 to 14 from one table or publication and total enrollment of 6- to 14-year olds taken from another.
4. During preliminary mapping and graphing of variables, occasional errors were spotted where a state was wildly out of line.
5. Noting variables (as some of those on roads) which were so erratic in correlation matrices as to defy interpretation.

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[1] Myers, loc. cit., p. 5.

Statistical techniques

The procedure for selecting variables was first to seek comparable data within each category for two or more census years. Some of the data were put into similar forms for comparisons; for example, in tabulating adult literacy rates the 1930 census used 30 plus years of age, the 1940 census used age 40 plus, and the 1960 census used 5-year categories through 85 plus years. The percentages were computed for the 30 plus age group for 1930 and 1960 and for the 40 plus age group in 1940. For 1960 the 5-year age categories were added to form proportions comparable to the preceding censuses. The figures for each variable were copied in raw form for each state, put into a percentage or ratio form, and checked for comparability and internal evidence of accuracy.

Apart from the background and descriptive material, the methodology of the study embraces straightforward statistical analysis. The distribution and diffusion of education among sub-populations (residence, age, sex, occupation) in each of the states of Mexico is delineated for each of the four census years. The basic problem is to trace the interrelationships between educational and other data at a given time and to relate time trends in these two broad categories of data. The statistical techniques were simple correlations, component analysis (varimax rotation), and multiple regression analysis, together with statistical mapping and scattergrams.

After the data were edited and percentages derived, all states on each item were ranked and the array divided by quartiles to provide information about variability among states and a basis for deciding whether to use raw or log scores in the correlation and components analysis. The following equation was computed for each distribution, from both raw scores and logarithmic values:

$$\frac{Q_1 - M}{M - Q_3}$$

where Q_1 = quartile 1,

M = median, and

Q_3 = quartile 3.

The log or the raw score was then used depending on which distribution was more nearly symmetrical (and to what extent closer to a normal curve). The log of 100 minus the raw percentage score was used where this came closer to symmetry. Specifications concerning log transforms of variables for regression and components analysis are given in the glossary in the Appendix tables. A starred item (*) in a table indicates the log transform of 100 minus the raw percentage score and should be interpreted by a reversal of sign. Two asterisks (**) or two reversals are interpreted by the sign as it appears. In tables accompanying the text, signs have been changed instead of using stars on the reported correlations. Alternatively in some cases, as with migration and with incomes under 500 pesos monthly, the description of the variable is revised.

The Federal District was omitted from the correlations and the subsequent procedures because its extreme values were likely to distort the associations among variables.[1]

To get a clearer picture of possible relationships, certain variables characterizing education and selected socio-economic aspects were selected for scattergramming and variables were chosen for preliminary mapping.

From this initial investigation, five correlation matrices of approximately 100 variables each were computed.[2] The output was then studied for preliminary substantive insights and for selection of variables to be used in a factor analysis. One criterion in setting up the factor matrices was to choose those variables that showed relatively little correlation with other scores from the same matrix but high correlations with scores from other matrices. In other words, where several variables in the correlation matrix formed a tightly knit group, only one variable of that cluster was used in the factor matrix. An item showing low intercorrelations with all other variables was eliminated since it would contribute little to the definition of factors. Four factor matrices were run and will be designated hereafter by the letters A, B, C, and D. The purpose of the components analysis was to reduce the original number of descriptive variables to a smaller number of mutually independent factors each of which pulled out components common to a large number of associated traits. Factor scores that were interpreted to have special relevance for development were mapped to point out the geographic clustering of traits.

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[1] However, the Federal District is included in the discussions of percentage distributions and rankings throughout the study. Predictions of the position of the Federal District were made from the regression analysis and a separate section is devoted to this in Chapter VI.

[2] Eight variables were repeated in all matrices: proportions of economically active males in agriculture, proportions of males walking barefoot,

Some multiple regressions were run with educational enrollments as the dependent variables, using selected education and non-education variables as possible predictors of enrollment variations. These are discussed in Chapters V and VI. Variables that had high loadings on the same factor were not included in the same regression. The maximum number of variables in one regression

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useable roads to area, and enrollment of 6- to 14-year olds, each for 1940 and 1960. The matrices were organized in the following way: Matrix 1, literacy and characteristics of culture; Matrix 2, occupations, characteristics of the economy, and adult levels of education; Matrix 3, demographic qualities, communication and transportation items, continuation rates of children in school, and variables showing changes over time; Matrix 4, education of youth, as enrollments, age-grade progress, pass rates, and school facilities; Matrix 5, the salient qualities of the adult population: literacy, schooling, occupations, income, demography. These were chosen after examination of the first four matrices, and are drawn from all of them.

equation was five. Educational enrollments were the dependent variables and the independent variables selected to "explain" enrollments were drawn from various categories of data--agricultural structure, occupations, demographic characteristics, communication, and transportation.

TABLE 1

INVENTORY OF VARIABLES USED

	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
Education								
Literacy: age								
Per cent M+F								
6+	...	142	143	144	...	...	...	...
10+	139	140	...	141	...	...	...	...
Per cent male								
10-14	155	157	...	159	...	189	...	173
15-19	...	...	...	...	...	188	...	172
20-24	...	...	...	...	...	187	...	171
25-29	...	...	...	...	...	186	...	170
30-39	...	...	...	...	...	185	...	169
40-49	...	...	...	...	...	184	...	168
50-59	...	...	...	...	...	183	...	167
60+	...	...	...	...	...	182	...	166
30+	149	...	...	151	...	...	...	...
40+	...	145	...	147	...	...	...	...
Per cent female								
10-14	156	158	...	160	...	197	...	181
15-19	...	...	...	...	...	196	...	180
20-24	...	...	...	...	...	195	...	179
25-29	...	...	...	...	...	194	...	178
30-39	...	...	...	...	...	193	...	177
40-49	...	...	...	...	...	192	...	176
50-59	...	...	...	...	...	191	...	175
60+	...	...	...	...	...	196	...	174
30+	150	...	...	152	...	...	...	...
40+	...	146	...	148	...	...	...	...
Per cent of population age 6 yrs. and over, literate but no schooling								
Males	...	153	...	...	...	...	...	...
Females	...	154	...	...	...	...	...	...

TABLE 1--Continued

	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
Low school attainment:								
Per cent of males by age and years of school								
6+ No school	...	254	...	256	...	...	...	...
25+ No school	...	...	226	...	...	...	...	...
30+ No school	...	...	...	228	...	...	...	...
25+ 1-6 yrs. school	...	...	232	...	...	...	...	...
30+ 1-6 yrs. school	...	...	...	234	...	...	...	...
Per cent of females by age and years of school								
6+ No school	...	255	...	257	...	...	...	...
25+ No school	...	...	227	...	...	...	...	...
30+ No school	...	...	...	229	...	...	...	...
25+ 1-6 yrs. school	...	...	233	...	...	...	...	...
30+ 1-6 yrs. school	...	...	...	235	...	...	...	...
High school attainment:								
Per cent of males by age and years of school								
6+ 6+ yrs. school	...	261	...	...	...	...	...	...
25+ 7+ yrs. school	...	...	236	...	...	...	...	...
30+ 7+ yrs. school	...	...	...	238	...	...	...	...
25+ 10+ yrs. school	...	...	240	...	...	...	...	...
30+ 10+ yrs. school	...	...	...	242	...	...	...	...
25+ 13+ yrs. school	...	...	244	...	...	...	...	...
30+ 13+ yrs. school	...	...	...	246	...	...	...	...
15+ baccalaureate	...	248	...	...	...	...	...	...
15+ university	...	250	...	...	...	...	...	...

TABLE 1--Continued

	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
Per cent of females by age and years of school								
6+ 6+ yrs. school	...	262	...	...	...	...	...	...
25+ 7+ yrs. school	...	...	237	...	...	...	...	...
30+ 7+ yrs. school	...	...	...	239	...	...	...	...
25+ 10+ yrs. school	...	...	241	...	...	...	...	...
30+ 10+ yrs. school	...	...	...	243	...	...	...	...
25+ 13+ yrs. school	...	...	245	...	...	...	...	...
30+ 13+ yrs. school	...	...	...	247	...	...	...	...
15+ baccalaureate	...	249	...	...	...	...	...	...
15+ university	...	251	...	...	...	...	...	...
Education of youth								
Enrollments:								
Per cent of 4 and 5 year olds in preschool	...	263	...	264	...	...	...	...
Per cent M+F 6-14 yrs.	265	...	...	266	...	274	...	273
Per cent males								
6-10 yrs. old	267	...	...	...	...	...	...	...
6-14 yrs. old	...	...	...	270	...	...	...	...
7-12 yrs. old	...	...	276	...	...	...	...	...
15-17 yrs. old	...	...	334	...	...	...	...	...
Per cent females								
6-10 yrs. old	268	...	...	...	...	...	...	...
6-14 yrs. old	...	...	...	271	...	...	...	...
7-12 yrs. old	...	...	277	...	...	...	...	...
15-17 yrs. old	...	...	335	...	...	...	...	...

TABLE 1--Continued

	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
Pass rates:								
Per cent who pass exam of those present								
Grade 2	...	...	...	...	369	377	368	376
Grade 4	...	...	...	...	371	379	370	378
Grade 6	...	...	...	...	373	381	372	380
Per cent who pass secondary school exam								
Males	...	...	...	340	...	...	...	...
Females	...	...	...	341	...	...	...	...
Age grade progress in school								
Per cent males								
Age 8 above Grade 1	...	...	...	...	...	345	...	344
Age 10 in Grade 1	...	...	...	...	...	348	...	347
Age 10 above Grade 3	...	...	...	...	...	351	...	350
Age 12 above Grade 3	...	...	...	...	...	353	...	352
Age 13 modal grade	...	...	...	...	...	355	...	354
Per cent females								
Age 8 above Grade 1	...	...	...	...	...	357	...	356
Age 10 in Grade 1	...	...	...	...	...	360	...	359
Age 10 above Grade 3	...	...	...	...	...	363	...	362
Age 12 above Grade 3	...	...	...	...	...	365	...	364
Age 13 modal grade	...	...	...	...	...	367	...	366
School facilities:								
Per cent of schools with 1 to 3 grades only	...	...	...	395	390	394	389	393
Per cent of economically active population who are teachers	...	387	...	388	...	...	...	...

TABLE 1--Continued

		Total State				Rural		Urban	
		1930	1940	1950	1960	1940	1960	1940	1960
Continuation rates primary school by percentages:									
Beginning of year enrollments									
Grade	Year								
2/1	1943/1942	...	...	...	...	291	...	286	...
3/2	1943/1942	...	...	...	...	292	...	287	...
4/3	1943/1942	...	...	...	...	293	...	288	...
5/4	1943/1942	...	...	...	...	294	...	289	...
6/5	1943/1942	...	...	...	...	295	...	290	...
2/1	1960/1959	...	...	...	...	...	302	...	297
3/2	1960/1959	...	...	...	...	...	303	...	298
4/3	1960/1959	...	...	...	...	...	304	...	299
5/4	1960/1959	...	...	...	...	...	305	...	300
6/5	1960/1959	...	...	...	...	...	306	...	301
End of year enrollments (day school)									
Grade	Year								
2/1	1943/1942	...	...	...	...	315	...	310	...
3/2	1943/1942	...	...	...	...	316	...	311	...
4/3	1943/1942	...	...	...	...	317	...	312	...
5/4	1943/1942	...	...	...	...	318	...	313	...
6/5	1943/1942	...	...	...	...	319	...	314	...
End of year enrollments									
Grade	Year								
2/1	1960/1959	...	...	...	...	...	325	...	320
3/2	1960/1959	...	...	...	...	...	326	...	321
4/3	1960/1959	...	...	...	...	...	327	...	322
5/4	1960/1959	...	...	...	...	...	328	...	323
6/5	1960/1959	...	...	...	...	...	329	...	324
Grade 5/1									
Urban 1942		...	...	...	...	...	...	330	...
Rural 1942		...	...	...	...	331	...	...	...
Urban 1960		...	...	...	...	...	...	332	...
Rural 1960		...	...	...	...	333	...	...	...

TABLE 1--Continued

	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
Continuation rates secondary school by percentages:								
Third year/first year								
Males	...	...	...	338	...	...	...	...
Females	...	...	...	339	...	...	...	...
Demographic								
Density to area:	...	1	...	2	...	...	...	...
Migration:								
Per cent of males born in the state in which they are living	...	15	16	17	...	...	...	...
Urbanization:								
Per cent of population in towns of 2,500+	3	4	5	6	...	...	...	...
Per cent of population in cities of 50,000+	...	...	...	12	...	...	...	...
Per cent of urban population in capital city	...	8	...	9	...	...	...	...
Size of capital city	...	10	...	11	...	...	...	...
Capital city is largest city or not	...	...	...	7	...	...	...	...
Marriage and fertility:								
Per cent of 20-24 year old females single	...	...	...	45	...	...	...	...
Per cent of total females under 5 yrs. old	...	46	...	47	...	...	...	...
Number of children born living to females 40-49 yrs. old	...	...	...	...	...	49	...	48
Culture								
Per cent of total population non-Catholic	...	113	...	114	...	...	...	...
Per cent of dwellings that have running water	...	...	...	43	...	...	...	...

TABLE 1—Continued

	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
Per cent of population who sleep on floor and do not eat wheat bread	...	115	...	...	...	...	...	...
Per cent of population who sleep on bed	...	116	...	...	...	...	...	...
Per cent of population who do not eat wheat bread	...	117	118	119	...	...	...	...
Per cent of population who walk barefoot								
Males + females	...	...	...	...	...	124	...	123
Males	...	125	126	127	...	...	...	...
Females	...	128	129	130	...	...	...	...
Labor force status and occupations								
Economically active:								
Per cent of males	50	51	52	53	...	...	...	...
Per cent of females	54	55	56	57	...	...	...	...
Per cent of females 10+ who are econ. active	...	58	...	...	...	...	...	...
Per cent of females 12+ who are econ. active	...	...	...	59	...	...	...	...
Per cent of 8-11 yr. olds who are econ. active								
Males	...	...	...	62	...	...	...	...
Females	...	...	...	63	...	...	...	...
Per cent of economically active males in								
Manufacturing	95	96	...	97	...	...	...	...
White collar	...	64	...	65	...	...	...	...
Clerical	...	...	...	71	...	...	...	...
Professional	...	...	...	74	...	...	...	...
Agriculture	78	79	...	80	...	...	...	...
Mining	110	111	...	112	...	...	...	...
Public administration	76	77	...	...	...	...	...	...

TABLE 1—Continued

	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
Per cent of economically active females in								
White collar	...	67	...	68	...	...	...	...
Clerical	...	...	...	72	...	...	...	...
Professional	...	...	...	75	...	...	...	...
Per cent of economically active M+F in								
Professional	...	...	...	73	...	...	...	...
Clerical	...	...	...	70	...	...	...	...
Characteristics of agriculture								
Per cent of males in agriculture who are laborers	...	83	...	84	...	...	...	...
Per cent of males in agriculture who are proprietors	...	85	...	86	...	...	...	...
Per cent of males in agriculture who are ejiditarios	...	82	...	...	...	...	...	...
Per cent of total farms that are mechanized	...	...	89	...	...	...	...	...
Per cent of farms without even animal traction	...	...	90	...	...	...	...	...
Equipment/land value	...	...	88	...	...	...	...	...
Glick: returns to the Human Agent	92	...	93	...	...	...	...	...
Per cent in agriculture with incomes over 500 pesos monthly	...	...	...	91	...	...	...	...
Characteristics of manufacturing								
Per cent of females in manufacturing labor force	99	100	...	101	...	...	...	...
Payroll per month/number employed in factory	105	106	107	108	...	...	...	...

TABLE 1--Continued

	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
Value added by manufacturing: Glick	...	...	104	...	...	...	...	...
Per cent of population in manufacturing with incomes 1,500+ pesos monthly	...	...	...	102	...	...	...	...
Per cent of population in manufacturing with incomes over 500 pesos monthly	...	...	...	103	...	...	...	...
Communication, transportation and other development indices								
Per cent of dwellings with radios	...	...	...	44	...	...	...	...
Per cent of population using libraries with 500+ volumes	...	42	...	...	...	...	...	...
Number of seats sold at cinema/population	...	39	...	40	...	...	...	...
Per cent of population who own bicycles	...	29	...	30	...	...	...	...
Per cent of population who own automobiles	...	32	...	33	...	...	...	...
Railroads/population	...	18	...	19	...	...	...	...
Railroads/km^2	...	20	...	21	...	...	...	...
Roads/population	...	22	...	24	...	...	...	...
Roads/km^2	...	25	...	27	...	...	...	...
Usable roads/population	...	23	...	...	...	...	...	...
Usable roads/km^2	...	26	...	...	...	...	...	...
Paved roads/roads	...	...	...	28	...	...	...	...
Electricity consumption per capita	...	36	...	37	...	...	...	...
Index of development: Glick	...	...	61	...	...	...	...	...

TABLE 2

VARIABLES CONSTRUCTED AS RATIOS OR DIFFERENCES OF TABLE 1 VARIABLES

Variables Showing Change over Time and Ratios	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
Education								
Literacy percentages								
Males by age								
(15-19)-(40-49)						202		198
(40-49)-(60+)						203		199
Females by age								
(15-19)-(40-49)						204		200
(40-49)-(60+)						205		201
Males minus females by age								
60+						216		206
50-59						217		207
40-49						218		208
30-39						219		209
25-29						220		210
20-24						221		211
15-19						222		212
10-14						223		213
Males/females								
15-19						225		215
40-49						224		214
Males								
1940-1930	161	161						
1960-1940		163		163				
Females								
1940-1930	162	162						
1960-1940		164		164				
6+ yrs. 1960-1950/ 1960-1940		165						

TABLE 2--Continued

Variables Showing Change over Time and Ratios	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
School attainment								
Adults age 25+ 1950								
Adults age 30+ 1960								
No schooling								
Females/males			259	260				
Males 1950-1960			258---	---258				
Education of youth								
Enrollments								
Percentage enrolled in school for first time at age 6 by monthly income in pesos								
200				278				
201-600				279				
601-1,000				280				
1,000				281				
(601-1,000)-(200)				282				
Percentage enrolled in school for first time at age 6 by father's occupation								
Agriculture				283				
Professional				284				
(Father professional) minus (father in agriculture)				285				
Females/males								
6-10 year olds	269							
6-14 year olds				272				
Urban minus rural								
6-14 year olds						275---		---275

TABLE 2--Continued

Variables Showing Change over Time and Ratios	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
Age grade progress in school:								
Age 8 above Grade 1 urban minus rural								
Males						346	----	346
Females						368	----	368
Age 10 in Grade 1 rural minus urban								
Males						349	----	349
Females						361	----	361
School facilities								
Schools with 1 to 3 grades only, 1942 minus 1960								
Urban							396	396
Rural					397	397		
Beginning of year enrollments								
Urban minus rural								
4/3 1943/1942					296	----	296	
4/3 1960/1959						307	----	307
1960 minus 1942								
4/3 Urban							308	308
4/3 Rural					309	309		
Demographic								
Urbanization:								
Percentage of population in towns 2,500+								
1960-1950/1960-1940		14	14	14				
1960/1930	13	----	----	13				

TABLE 2--Continued

Variables Showing Change over Time and Ratios	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
Culture								
Percentage of total population								
Do not eat wheat bread								
1940-1950		120	120					
1950-1960			121	121				
1940-1960		122		122				
Percentage who walk barefoot								
Males								
1940-1950		133	133					
1950-1960			134	134				
1940-1960		135		135				
Females								
1940-1950		136	136					
1950-1960			137	137				
1940-1960		138		138				
Males/females barefoot		131		132				
Labor force status and occupations								
1960-1940								
Percentage of econ. active males in								
Manufacturing		98		98				
Agriculture		81		81				
White collar		66		66				
Percentage of econ. active females		60		60				
Percentage of econ. active females in white collar		69		69				

TABLE 2--Continued

Variables Showing Change over Time and Ratios	Total State				Rural		Urban	
	1930	1940	1950	1960	1940	1960	1940	1960
Characteristics of agriculture								
1960-1940								
Percentage of males in agriculture who are proprietors		87	----------	87				
1950-1930								
Glick returns to the Human Agent	94	----------	94					
Characteristics of manufacturing								
Payrolls/number employed in factory 1955/1940		109	---------	109				
Communication, transportation, and other development indices								
1960-1940								
Seats sold at cinema/pop.		41	---------	41				
Bicycles/pop.		31	----------	31				
Autos/pop.		35	----------	35				
1960/1939								
Percentage of autos to population		34	---------	34				
1960-1940								
Electricity consumption per capita		38	----------	38				

CHAPTER II

THE SOCIO-ECONOMIC GEOGRAPHY OF MEXICO

Mexico has been called a society in transition, assuming the direction of development to be toward an industrial and urban nation. How far has Mexico come in relation to other nations of the world toward this goal? To what exten are the components of development present in Mexico? How do they interact? What are the patterns of concentration and dispersion of modernization. An overview of such questions is the primary purpose of this chapter. At first there will be a brief discussion of summary national indices of Mexican development in world perspective, going on from this to a presentation of internal geographic variations on three summary modernization indicators (factors from each of the three matrices used in the components analysis). Later sections present spatial distributions and relate urbanization indicators on urban structure to population distribution and densities, occupational structures, characteristics of agriculture, characteristics of manufacturing, cultural traits, and transportation and communication facilities. Literacy and schooling are discussed only as they are important in the modernization factor; they will take a central place in chapters to follows.

Indices of Mexican Development in World Perspective

The *Atlas of Economic Development* provides an ecological framework for an assessment of economic growth among nations of the world as of the late 1950s. The world means, given in the *Atlas*, are based on population-weighted values fo the countries for which data on the particular item were available. Computations were made for Argentina's relative position as well as Mexico's in order to provide comparisons between two of the more advanced Latin American countries. Figure 1 lists the variables used in the Atlas.[1]

Mexico's economy has been expanding steadily in the last two decades. A wide range of consumer and producer items are being manufactured. At the same time the agricultural sector has been producing raw materials for both domestic industry and export. The Atlas gave Mexican gross national product per capita as $187 in American currency, which was slightly below the world mean of $200, and compares with $2,343 for the United States, $374 for Argentina, and $66 for Bolivia. A later figure places the Mexican gross national product per capita, corrected to the prices of 1960 at $304, the per capita product in the Federal District at $796, and in the state of Nuevo Leon at $566.

This increase took place in spite of one of the highest annual rates of population growth in the world, 2.9 per cent. (Argentina had a growth rate of 1.9 per cent, the United States 1.8 per cent.) Such rapid growth engenders the risk of reducing individual incomes and the level of living.

The proportion of the population aged 5 to 14 (26.3 per cent in 1957) was among the world's highest; among nations the range was from 13.3 per cent to 36.1 per cent (for Argentina 19.5 per cent). While youth implies potential productivity, a currently high proportion of dependents places a heavier burden on the economically active, especially in costs for the expansion of the formal educational system.

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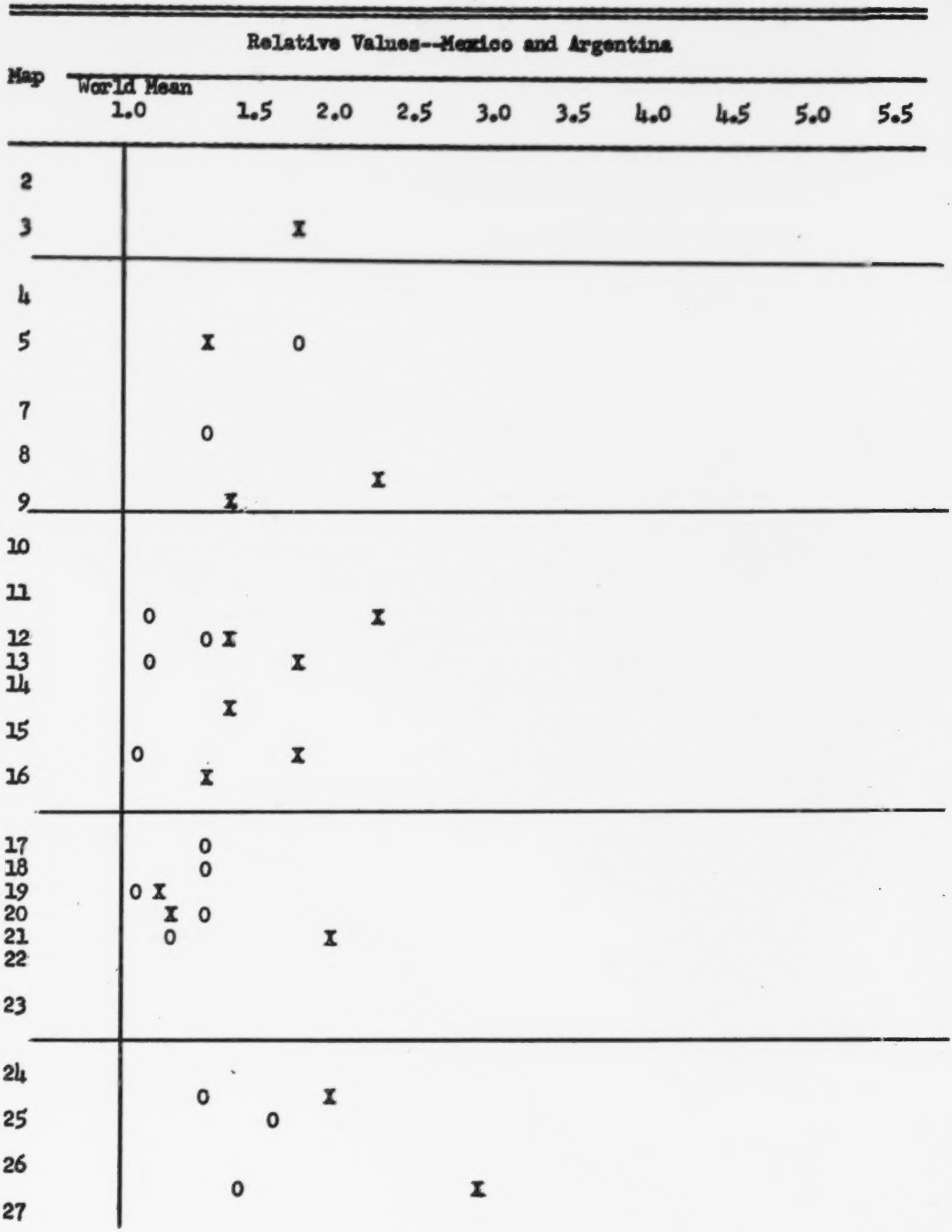
[1] Norton Ginsburg, Atlas of Economic Development (Chicago: University of Chicago Press, 1961).

Fig. 1.--Economic indicators for Mexico and Argentina (from Norton Ginsburg, Atlas of Economic Development [Chicago: The University of Chicago Press, 1961]). The relative positions of Mexico and Argentina were in the form of ratios to the world means given in the *Atlas*. The world mean is a weighted average for reporting countries; the weights are country populations. O = Mexico, X = Argentina.

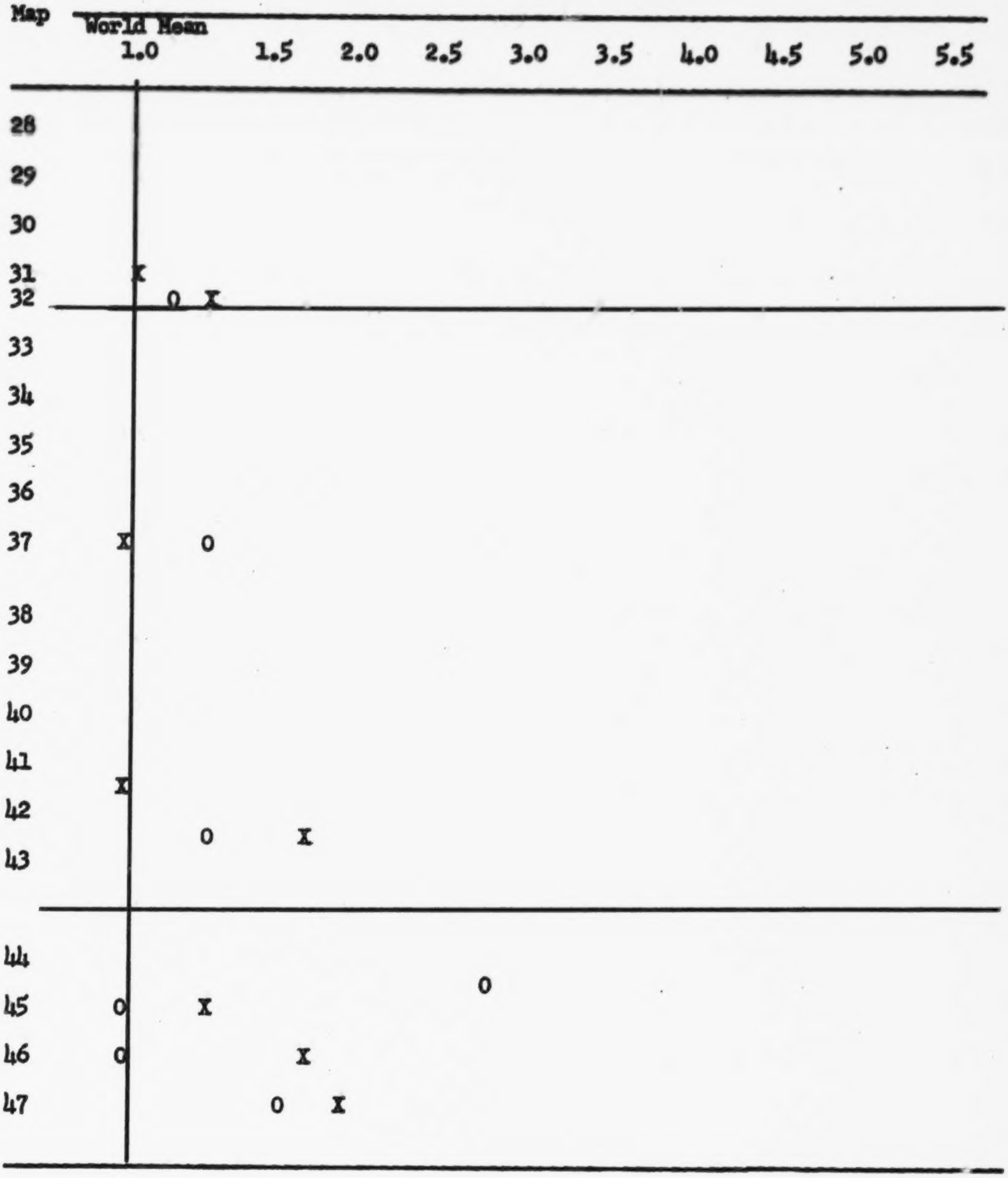
Map		Relative Values--Mexico and Argentina								
		.1	.2	.3	.4	.5	.6	.7	.8	.9
2	Billions of U. S. dollars--gross national product					O	X			
3	U. S. dollars per capita--gross national product									O
	II. The Population									
4	Persons/sq. kilometer--density of population				X				O	
5	Annual rate--population growth									
6	Infant deaths/1,000 live births--infant mortality							X		
7	Proportion in age groups 5-14--youthfulness of population									X
8	Physicians and dentists per 100,000 population						O			
9	Calories/capita/day--food supply									O
	III. The Organization of Population									
10	Per cent of active population in agricultural occupations				X					
11	Per cent of population in cities of 20,000 and more--urban pop.									
12	A measure of primacy--urban pop.									
13	Percentage of adults literate									
14	Daily newspaper circulation per 1,000 population					O				
15	Proportion of children 5-14 in primary school									
16	Percentage of total pop. in secondary and higher education			O						
	IV. The Resource Endowment									
17	Hectares/capita--cultivated land									
18	Hectares/capita--agricultural pop.									
19	Per cent of land area cultivated									
20	Wheat yields--100 kilograms/hectare									
21	Rice yields--100 kilograms/hectare									
22	Energy potentials--trillions of kilowatt hours	X	O							
23	Energy potentials--millions of kilowatt hours/capita	X	O							
	V. Accessibility									
24	Railway density--kilometers/100 square kilometers									
25	Railway density--kilometers/100,000 population									
26	Railway density--kilometers/person to pop. distance									
27	Million freight ton--kilometers/railway kilometers		X	O						



Relative Values--Mexico and Argentina

Map		Relative Values--Mexico and Argentina								
		.1	.2	.3	.4	.5	.6	.7	.8	.9
28	Million freight ton--kilometers/100,000 population			O					X	
29	Road density--kilometers/100 square kilometers		X	O						
30	Road density--kilometers/100,000 population				O			X		
31	Motor vehicles/1,000 population					O				
32	Vehicles/100 kilometers of roads									
	VI. Technology & Industrialization									
33	Gross energy consumption--millions of megawatt hours							X	O	
34	Gross energy consumption--megawatt hours per capita						O			X
35	Commerical energy consumption--megawatt hours per capita					O	X			
36	Commercial energy consumption as per cent of gross consumption									
37	Commercial energy consumption--annual rate of change per capita, 1937-54									
38	Electricity generation--kilowatt hours per capita				O	X				
39	Hydroelectricity generation--kilowatt hours per capita	X					O			
40	Water power development--proportion of potentials devel.	X				O				
41	Consumption of steel--metric tons per 1,000 population			O						
42	Petroleum refining capacity--barrels/day/1,000 population									
43	Commercial fertilizer consumption--kilograms/hectare of cultivated land			O						
	VII. External Relations									
44	International mail flow--pieces dispatched/1,000 population					X				
45	Imports and exports in millions of U. S. dollars									
46	Imports and exports in U. S. dollars per capita									
47	Raw materials as per cent of exports									

Relative Values--Mexico and Argentina



The world pattern of primary-school enrollment resembled the geographic distribution of literacy and gross national product per capita.[1] About 47 per cent of Mexico's 5- to 14-year olds were enrolled in primary school, compared with 68 per cent in Argentina; New Zealand ranked first with 90 per cent. In 1957, 60 to 65 per cent of Mexico's adult population were literate compared with 85 to 90 per cent in Argentina. Mexico ranked above the world mean in proportion of youth in primary school and in the percentage of adults literate. However, there was a serious gap between the population receiving basic and advanced education. The stock of manpower with advanced education has implications for the ability of a country to use technology. Mexico's position was well below the world mean in the proportion of the population enrolled in post-primary schools: .59 per cent (compared with 2.86 per cent for Argentina and 6.02 per cent for the United States).

On infant mortality and food supply (measures of the "well being" of the population), Mexico came close to the world mean, and slightly below it in availability of physicians and dentists.

Mexico ranked above the world mean in urbanization (24 per cent living in cities of 20,000) but far below Argentina (48 per cent). On city primacy (the percentage of the population of the four largest cities who live in the largest city), the ratio for Mexico was 74.3 per cent compared with 79.4 per cent for Argentina. High proportions of the population employed in agriculture can be taken as the reverse of an industrial urban society (the data did not differentiate commercial from subsistence farming). In 1957, 58 per cent of Mexico's population was engaged in agriculture; the range among nations was 5 to 93 per cent. Ten years earlier, in 1947, only 25 per cent of the population of Argentina had been employed in agriculture. Much attention has been given to land redistribution in Mexico, and for cultivated land per capita of the total and of the agricultural population, Mexico's position was far above the world mean. However, widespread distribution and land ownership is not a reliable indication of agricultural productivity. (Land per capita of the total population was .62 hectares for Mexico, the world mean was .49; land per capita of the agricultural population was 3.4 hectares for Mexico compared to the world mean of 2.57.) Wheat and rice yields were above the world mean; but these are not staple crops in Mexico. In Mexico, a diet of maize, beans, and squash is part of the pattern of going without shoes and adhering to an indigenous way of life. A diet of wheat-bread and rice, which are non-indigenous foods, marks the changing parts of the society; increased urbanization has been associated with an increased demand for these latter foods.

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[1] *Ibid.*, p. 42.

On railroad density in ratio to area and to population, Mexico ranked above the world mean. On intensity of use of the railway per kilometer of track, Mexico and Argentina were both low. Only six countries were above the world mean of 2.57 million freight ton-kilometers per 100,000 population; at 70 per cent of the world mean, Argentina was the highest ranking Latin American country on this measure, while Mexico scored only 30 per cent of the world mean. Road density showed a pattern similar to railroads.

The energy consumed in a country may measure the ability of that society to harness resources for productive ends. All of Latin America except Brazil were below the world mean in gross energy consumption, and in megawatt hours per capita all except Cuba and Venezuela were below the mean. However, Mexico and Argentina alike approached the world mean in the proportion of total energy consumed from fossil fuels and hydroelectric power. Mexico was above the world mean on annual rate of change in commercial energy consumption per capita between

1937 and 1954. According to the world pattern, however, changes in this measure were not necessarily associated with rising incomes and levels of living. Among Latin American nations, Mexico ranked second behind Brazil in per capita output of crude steel.

One index of the application of technology to agriculture is the use of commercial fertilizer. Mexico utilized 7.0 kilograms per hectare of cultivated land and Argentina .4 kilograms; the world mean was 22 kilograms. However, differences in agricultural systems and in soils must be considered in evaluating fertilizer use.

One value of the preceding comparisons is to test the consistency among measures of relative development. While each was selected as indicating industrialization, time and again particular measures failed to differentiate at all clearly among countries; development is complex and the meanings of many variables (notably among the "urbanization") vary with the context. We may expect that analogous ambiguities and complexities will arise even in comparisons among the states of Mexico, for that country is characterized by great geographic diversity.

Modernization Factors

Turning from an over-view of Mexico's position in world perspective, we can explore the patterns within Mexico. Table 3 delineates clusters of traits associated with differential modernization among the states of Mexico as they were revealed by components analysis of three partially overlapping sets of data: Factor Matrices A, B, and D.[1] The first factor in each case was best described as a summary "modernization" index, but emphasis differs depending upon the variables initially included in the program.

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[1] Factor Matrix C was composed of educational variables only.

TABLE 3

FACTORS DESCRIBING MODERNIZATION, AGRICULTURE, AND CULTURAL CHARACTERISTICS OF MEXICO

Variable Number		Modernization			Agriculture				Culture and Sex Differences	
	Factor Matrix	A	B	D	A	B	D	D	A	D
	Factor Number	1	1	1	4	2	3	6	2	2
Population distribution and change										
2	Density 1960	-.487	-.490	....	.306	-.250	....	....	.238	....
4	Urban 1940	.721	.783	.678	-.065	-.068	.103	-.073	-.320	-.352
8	Capital/urban 1940	.421	.332	....	.037	.110	....	....	.049	....
10	Capital size 1940	.065	.052	....	-.051	.021	....	....	-.113	....
12	Pop. 50,000+ 1960	....	.543	.460	....	-.287	.147	.328	....	-.429
13	Urban 1960/1930	....	.396	.516	....	-.445	.309	.180	....	.022
14	Urban 1960-1950/1960-1940	.187	.216	.196	-.029	-.102	.091	.087	-.191	-.109
15	In-migrant 1940	.673	.682	.685	.271	-.162	.264	-.080	-.357	-.349
Transportation										
18	RR/pop. 1940	.099	.151	....	-.017	.125	....	....	-.070	....
23	Roads/pop.^{B} 1940	....	.572	....	....	-.311	....	....	....	....
26	Roads/area^B 1940	....	-.152	....	....	-.152	....	....	....	....
27	Roads/area 1960	....	-.284	....	....	-.284	....	....	....	....
28	Roads paved 1960	.311	.371	....	.031	-.123	....	....	-.160	....
29	Bicycles/pop. 1940	....	....	.391	....	....	-.230	-.213	....	-.122
30	Bicycles/pop. 1960	.285	.346	....	-.349	.480	....	....	.038	....
31	Bicycles/pop. 1960-1940	....	....	.156	....	....	-.216	-.252	....	-.066

32	Autos/pop. 1940	.737	.705	.636	.232	-.514	.393	.054	-.345	-.378
34	Autos/pop. 1960/1939	....	....	.237	....	....	-.140	.118	....	.383
35	Autos/pop. 1960-1940	....	....	.546	....	....	-.014	-.126	....	.079
Utilities and communication										
36	Elect/capita 1940	.263	.234	.166	.403	-.658	.551	-.104	-.245	-.281
37	Elect/capita 1960	....	.473	....	....	-.687	....	....	....	....
38	Elect/capita 1960-1940	....	....	.414	....	....	.267	-.048	....	-.240
39	Movies/pop. 1940	.847	.791	.822	-.089	.029	-.046	.102	-.168	-.214
40	Movies/pop. 1960	.576	.647	....	.038	-.218	....	....	-.474	....
41	Movies/pop. 1960-1940	....	....	-.055	....	....	.253	-.107	....	-.249
42	Library use/1940	.200	.237	.150	.106	-.289	.228	-.113	-.295	-.373
43	Running water 1960	....	.355	....	....	-.197	....	....	....	....
44	Radio 1960	.746	.839	.777	.147	-.267	.285	.062	-.459	-.380
Marriage and fertility rates										
45	Single F 20-24 1960	.019	.227	....	.157	-.113	....	....	-.545	....
47	F under 5 yrs./F 1960	.114	.098	....	.185	-.132	....	....	-.101	....
Labor force participation										
58	EcAct F 10+ 1940	.422	.326	.297	.517	-.416	.553	.098	-.148	-.242
59	EcAct F 12+ 1960	.287	.151	.251	.619	-.432	.587	.166	.128	.117
60	EcAct F 1960-1940	....	-.116	.034	....	-.188	.251	.098	....	.448
61	Devel. index 1950	....	.814	....	....	-.278	....	....	....	....
Employment of youth										
62	Employ 8-11 M 1960	-.625	-.785	-.721	-.094	.220	-.181	.160	.275	.210
63	Employ 8-11 F 1960	-.519	-.686	-.580	-.021	.218	-.132	.064	.502	.478

TABLE 3—Continued

Variable Number		Modernization			Agriculture				Culture and Sex Differences	
	Factor Matrix	A	B	D	A	B	D	D	A	D
	Factor Number	1	1	1	4	2	3	6	2	2
White collar and professional workers										
64	Collar/EcAct M 1940	.946	.903	.883	.036	-.154	.153	.082	-.212	-.227
66	Collar/EcAct M 1960-1940	.623	.632	.538	.158	-.304	.245	-.009	-.219	-.271
67	Collar/EcAct F 1940	....	....	.838	....	....	.014	.018	....	-.375
69	Collar/EcAct F 1960-1940	....	-.396	-.501	....	-.089	.243	-.088	....	-.092
70	Clerk/EcAct T 1960	.935	.901	.866	.052	-.176	.147	.147	-.247	-.270
74	Prof/EcAct M 1960	.785	.756	....	.152	-.304	....	....	-.165	....
75	Prof/EcAct F 1960	....	.684	....	....	.003	....	....	....	....
Public administration										
77	P.A./EcAct M 1940	.840	.732	....	.119	-.213	....	....	-.008	....
Agriculture										
79	Ag/EcAct M 1940	-.813	-.866	-.759	-.064	.174	-.209	.015	.357	.389
80	Ag/EcAct M 1960	-.855	-.856	-.787	-.161	.301	-.308	.056	.188	.199
81	Ag/EcAct M 1960-1940	-.326	-.253	-.296	-.172	.310	-.201	.020	-.170	-.185
82	Ejidos/Ag Pop 1940	-.014	.128	.082	-.139	.179	-.128	-.860	.124	.158
83	Ag Labor/Ag M 1940	-.263	-.287	-.295	.723	-.313	.564	-.145	-.198	-.194
84	Ag Labor/Ag M 1960	.266	.237	.193	.823	-.838	.911	-.058	-.268	-.244

85	Ag Prop/Ag M 1940	.202	.163	.261	-.155	-.034	-.036	.655	.134	.235
86	Ag Prop/Ag M 1960	-.259	-.208	-.175	-.829	.856	-.921	.021	.270	.241
87	Ag Prop/Ag M 1960-1940	....	-.240	-.272	....	.763	-.770	-.363	....	.064
89	Farm mechanized 1950	.625	.681	.633	.300	-.315	.359	-.056	-.599	-.546
91	Ag income over $500 1960	.733	.717	.733	.189	-.356	.300	.264	-.422	-.341
94	Returns Glick 1950-1930	....	.539	.607	....	-.035	.065	.167	....	-.221
Manufacturing										
98	Mfg/EcAct M 1960-1940	....	....	.187	....	....	-.001	-.089	....	.016
103	Mfg income over $500 1960	.790	.750	....	.289	-.443	....	....	-.261	....
105	Pay/Emp Fact 1930	....	.596	....	....	-.600	....	....	....	....
107	Pay/Emp Fact 1950	.373	.349	....	.333	-.663	....	....	-.268	....
109	Pay/Emp Fact 1955/1940	.011	....	.024	-.154	....	-.001	-.124	-.140	-.151
111	Mining/EcAct M 1940	....	.207	....	....	-.304	....	....	....	....
Culture traits										
125	Barefoot M 1940	-.387	....	-.381	-.130	....	-.185	-.038	.829	.867
127	Barefoot M 1960	....	-.610	....	....	.167	....	....	....	....
133	Barefoot M 1940-1950	....	....	-.172	....	....	-.283	.045	....	.835
134	Barefoot M 1950-1960	....	....	-.186	....	....	-.020	.029	....	.912
135	Barefoot M 1940-1960	-.222	-.380	-.190	-.157	.225	-.179	.040	.846	.928
128	Barefoot F 1940	-.507	....	-.496	-.146	....	-.224	-.109	.768	.791
136	Barefoot F 1940-1950	....	....	-.356	....	....	-.208	-.019	....	.775
137	Barefoot F 1950-1960	....	....	-.261	....	....	.043	-.050	....	.880
138	Barefoot F 1940-1960	....	-.517	-.342	....	.130	-.116	-.033	....	.876
123	Barefoot urban 1960	....	-.313	-.215	....	.009	.067	.126	....	.669
131	Barefoot M/F 1940	.567	.454	....	.065	-.195	....	....	.115	....
132	Barefoot M/F 1960	....	.589	....	....	.066	....	....	....	....

TABLE 3--Continued

Variable Number		Modernization			Agriculture				Culture and Sex Differences	
	Factor Matrix	A	B	D	A	B	D	D	A	D
	Factor Number	1	1	1	4	2	3	6	2	2
113	Non-Catholic T 1940	.452	.314	....	-.133	.125	....	....	.275	....
114	Non-Catholic T 1960	....	.437	....	....	.252	....	....	....	....
43	Water 1960	.294	.355	....	.237	-.197	....	....	-.384	....
115	Sleep on floor 1940	....	-.504	....	....	-.266	....	....	....	....
116	Sleep on bed 1940	.388	.476	....	.180	-.372	....	....	-.686	....
117	Nonwheat T 1940	-.166	-.718	-.753	.041	.035	-.037	-.128	.190	.078
119	Nonwheat T 1960	....	-.707	....	....	.040	....	....	....	....
120	Nonwheat 1940-1950	....	....	.096	....	....	-.005	-.121	....	.155
121	Nonwheat 1950-1960	....	....	-.518	....	....	-.014	.359	....	.222
122	Nonwheat 1940-1960	-.216	-.299	-.206	.068	.077	-.011	.105	.126	.224
Adult levels of education										
228	Adult 30+0 Sch M 1960	-.832	....	....	.081	....	....	....	.315	....
258	Adult 30+0 Sch M 1950-1960	....	....	-.494	....	....	-.143	-.111	....	.319
236	Adult 25+7+Sch M 1950	.939	....	....	.062	....	....	....	-.217	....
238	Adult 30+7+Sch M 1960	.929	....	.851	.100	....	.210	.126	-.225	-.253
239	Adult 30+7+Sch F 1960	....	....	.758	....	....	.231	.006	....	-.407
242	Adult 30+10+Sch M 1960	.907	....	....	.124	....	....	....	-.223	....

Enrollment

265	Enrol 6-14 T 1937	.703	.727	.797	.085	-.094	.095	.008	-.197	-.105
266	Enrol 6-14 T 1960	....	.775	.803	....	.033	.017	-.333	....	.161
267	Enrol 6-10 M 1930	.675	.777	.769	-.128	.021	-.023	-.065	-.011	.025
273	Enrol 6-14 urban 1960	.203	.239	.212	.109	-.145	.133	-.126	-.107	-.066
274	Enrol 6-14 rural 1960	.339	.447	.509	.117	-.039	.128	-.352	.174	.301
275	Enrol 6-14 U-R 1960	-.090	....	-.184	-.004	....	.017	.124	-.174	-.216

Enrollment and income in pesos monthly, 1959

278	Enrol 6/Inc $200	-.075	-.088	....	-.273	.079	....	....	-.063	....
280	Enrol 6/$601-$1,000	....	.252	....	....	.146	....	....	....	....
282	Enrol 6/(601-1,000)-(200)	-.157	-.197	....	.184	.106	....	....	.288	....

Enrollment and occupation of father, 1959

283	Enrol 6/agriculture	.363	.448	....	-.221	.130	....	....	-.182	....
284	Enrol 6/professional	....	.219	....	....	.244	....	....	....	....

Progress in school

	Continuation rates--primary school Beginning of year enrollment									
293	B 4/3 rural 1942	.378	.419	....	.148	-.315	....	....	.031	....
296	B 4/3 urban-rural 1942	....	-.360	-.455	....	.329	-.069	-.143	....	.008
299	B 4/3 urban 1960	....	....	.041	....	....	.156	-.049	....	.429
304	B 4/3 rural 1960	.063	.145	....	.112	-.126	....	....	.096	....
307	B 4/3 urban-rural 1960	....	-.208	....	....	.025	....	....	....	....
308	4/3 urban 1960-1942	-.104	....	-.093	-.031	....	-.041	-.080	.114	.149
309	4/3 rural 1960-1942	-.311	....	-.214	-.012	....	.000	-.093	.060	.132
330	B 5/1 urban 1942	....	.634	....	....	-.099	....	....	....	....
331	B 5/1 rural 1942	....	.298	....	....	-.414	....	....	....	....
332	B 5/1 urban 1960	....	.476	....	....	-.156	....	....	....	....
333	B 5/1 rural 1960	....	.492	....	....	-.508	....	....	....	....
	Continuation rates--secondary school									
338	Con Sec 3/1 M 1960	.133	....	....	.028	....	....	....	-.010	....

TABLE 3--Continued

Variable Number		Modernization			Agriculture				Culture and Sex Differences	
	Factor Matrix	A	B	D	A	B	D	D	A	D
	Factor Number	1	1	1	4	2	3	6	2	2
Age grade progress in school, 1963										
347	Age 10 Gr 1 M urban	....	-.706	....	....	.055	....	....	....	....
348	Age 10 Gr 1 M rural	....	-.801	-.815	....	.092	-.063	.176	....	.035
349	Age 10 Gr 1 M rural-urban	.619	....	-.784	.166	....	.087	.141	.218	.114
359	Age 10 Gr 1 F urban	....	-.774	....	....	-.024	....	....	....	....
360	Age 10 Gr 1 F rural	-.689	-.860	-.850	.031	-.028	-.028	.208	.299	.198
361	Age 10 Gr 1 F rural-urban	....	....	-.691	....	....	.076	.117	....	-.146
Education Literacy										
140	Literacy 10+ T 1940	....	....	.900	....	....	.085	.055	....	-.390
141	Literacy 10+ T 1960	....	....	.852	....	....	.045	-.018	....	-.419
153	Literacy 6+0 Sch M 1940	-.495	....	....	-.196	....	....	....	.132	....
155	Literacy 10-14 M 1930	.803	.924	....	-.164	-.013	....	....	-.195	....
156	Literacy 10-14 F 1930	....	.856	....	....	-.286	....	....	....	....
157	Literacy 10-14 M 1940	....	.949	.950	....	-.091	.020	.105	....	-.213
158	Literacy 10-14 F 1940	....	.946	.920	....	-.090	.034	.052	....	-.358
159	Literacy 10-14 M 1960	....	.934	....	....	-.042	....	....	....	....
160	Literacy 10-14 F 1960	....	.939	....	....	-.047	....	....	....	....
161	Literacy 10-14 M 1940-1930	.634	....	.662	.001	....	.076	.126	-.352	-.270
162	Literacy 10-14 F 1940-1930	....	....	.668	....	....	-.030	.149	....	-.135
163	Literacy 10-14 M 1960-1940	-.785	....	-.736	.208	....	.123	-.353	-.033	.004
164	Literacy 10-14 F 1960-1940	....	....	-.745	....	....	.040	-.312	....	.259
165	Lit. 6+ 1960-50/1960-40	....	....	-.347	....	....	-.029	-.419	....	.013

Literacy by age, 1960										
	Urban males									
168	40-49	.687	....	....	-.027	....	....	....	-.404	....
170	25-29	.736	....	....	.216	....	....	....	-.089	....
	Rural females									
192	40-49	.566	....	....	-.059	....	....	....	-.689	....
Age differences in literacy, 1960										
	Urban males									
198	(15-19)-(40-49)	-.398	....	-.296	.213	....	.139	-.169	.111	.129
199	(40-49)-(60+)	....	....	-.170	....	....	-.044	-.234	....	-.040
	Urban females									
200	(15-19)-(40-49)	-.536	....	-.511	.154	....	.033	-.173	.637	.652
201	(40-49)-(60+)	....	....	.279	....	....	-.059	.056	....	-.408
	Rural males									
202	(15-19)-(40-49)	.380	....	.534	-.068	....	-.091	-.050	.040	.163
203	(40-49)-(60+)	....	....	.402	....	....	-.107	.322	....	-.264
	Rural females									
204	(15-19)-(40-49)	-.119	....	-.011	.094	....	.022	-.335	.596	.687
205	(40-49)-(60+)	....	....	.591	....	....	-.068	.161	....	-.452
Sex differences in literacy, 1960										
208	40-49 MU-F	-.431	....	-.484	.052	....	-.029	.096	.795	.773
218	40-49 MR-F	-.313	....	-.342	-.046	....	-.097	-.066	.879	.839
221	20-24 MR-F	-.313	....	....	-.098	....	....	....	.833	....
Pass rates										
368	Pass 2/Pres U 1942	.335	.381	....	.443	-.252	....	....	-.598	....
369	Pass 2/Pres R 1942	.386	.447	....	.343	-.261	....	....	-.654	....
376	Pass 2/Pres U 1960	....	.224	....	....	-.203	....	....	....	....
377	Pass 2/Pres R 1960	.059	.217	....	.316	-.352	....	....	-.630	....
School facilities										
389	Sch Incomp U 1942	.046	....	-.069	.047	....	-.028	-.264	.341	.220
390	Sch Incomp R 1942	-.125	....	-.210	-.147	....	-.255	-.052	.238	.201
396	Sch Incomp U 1942-1960	....	....	-.058	....	....	-.041	-.007	....	-.106
397	Sch Incomp R 1942-1960	....	....	.008	....	....	-.043	-.242	....	-.057

Factor Matrix A (which was in fact done last) pulls together selected variables from each of the prior matrices and thus has the largest overlap with each. The variables included and their loadings on the first factor that showed up in this matrix are shown in the first column of Table 3. Traits with the highest positive loadings link white-collar occupations and adult school attainments. Thus the highest positive loadings (all over .900) were for males in white-collar occupations in 1940, the population of both sexes in clerical occupations in 1960, adult males with 7+ years of schooling in 1950 and in 1960 and with 10+ years of schooling in 1960. The high loading for proportion of males in public administration in 1940 (.840) also reflects a relationship between extent of education and occupational structure. Negative loadings were correspondingly highest for proportions of males engaged in agriculture (-.813 in 1940 and -.855 in 1960). Loadings for proportions of incomes over 500 pesos per month in manufacturing and in agriculture in 1960 were positive, at .790 and .733 respectively. Literacy rates and changes in them had only moderate loadings compared with the high loadings on the variables indicating somewhat higher educational attainments. Negative loadings on recent changes in literacy indicate that recent progress in this respect has been primarily a catching-up process in the more backward areas. At the forefront of change, on the other hand, are states that scored relatively high on auto ownership, attendance at movies, and use of radios in 1940, all variables with positive loadings above .700. Two other variables, urbanization in 1940 (.721) and in-migration in 1940 (.673), were also part of the lead cluster.

Matrix B in the components analysis included the occupation variables that were also in Matrix A, but it differed from Matrix A in several respects, the most important of which were the fuller representation of culture variables and variables relating to youth in school (which replace the emphasis on adult schooling). The Matrix B modernization factor accordingly picks up traits that were common to both Matrices A and B and had high loadings on Factor 1 of Matrix A, but adds positive loadings of .700 or more referring to school enrollments, negative loadings of .700 or more on proportion of over-age school children, wage employment of children, and the persistence of traditional traits (walking barefoot and not eating wheat bread). In the absence of adult schooling, the literacy variables receive higher loadings than in Factor 1 of Matrix A.

Factor Matrix D included all the change and difference variables, but the first factor is still dominated by variables relating to basic occupation-structures and levels of education. The only change variables with loadings over .600 refer to literacy of children age 10 to 14; loadings were positive for the period 1930 to 1940, negative for 1940 to 1960--a very interesting indicator of the phasing of development processes that will be described in later chapters. The only difference variables added in Matrix D that loaded .600 or higher on the first factor referred to urban-rural differences in the proportions of over-age children in Grade 1 (with high negative loadings).

One of the outstanding features of development is its uneven distribution and wide local variation in space. The northern states bordering on the United States and a few metropolitan areas in the center of Mexico (around the historically important cities of the Federal District, Guadalajara, and Puebla) have been favored. Abundant natural resources, favorable topography and climate, proximity to previously developed areas or sites of older population settlements, each provides a perspective from which to explain regional diversity. The physical profile that defines dissimilar regions in Mexico is paralleled by diverse subcultures with differing traditions and positions of lead or lag in the modernization process. Figure 2 presents this physical profile, Figure 3

Fig. 2.--Map of elevations, Mexico.

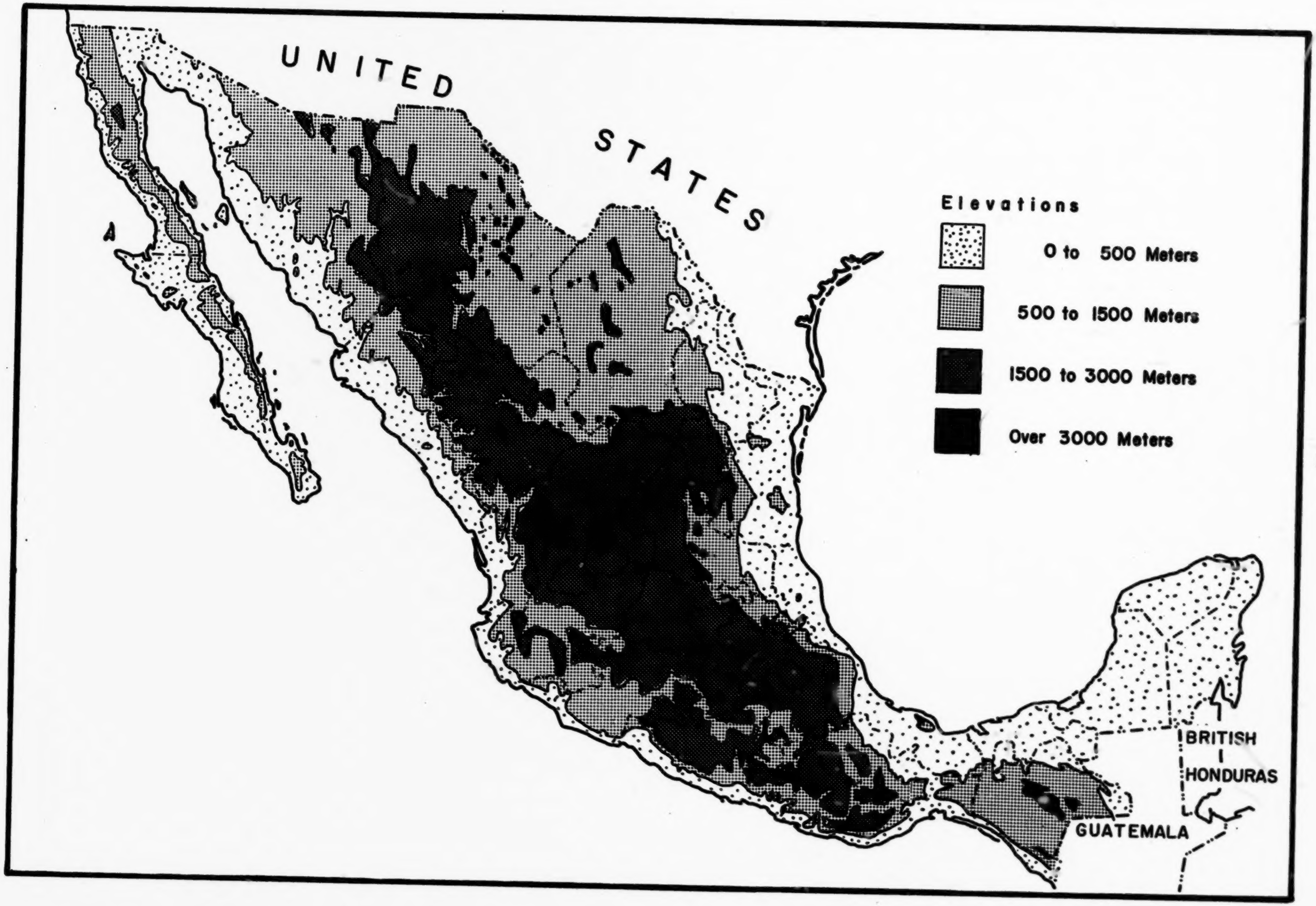
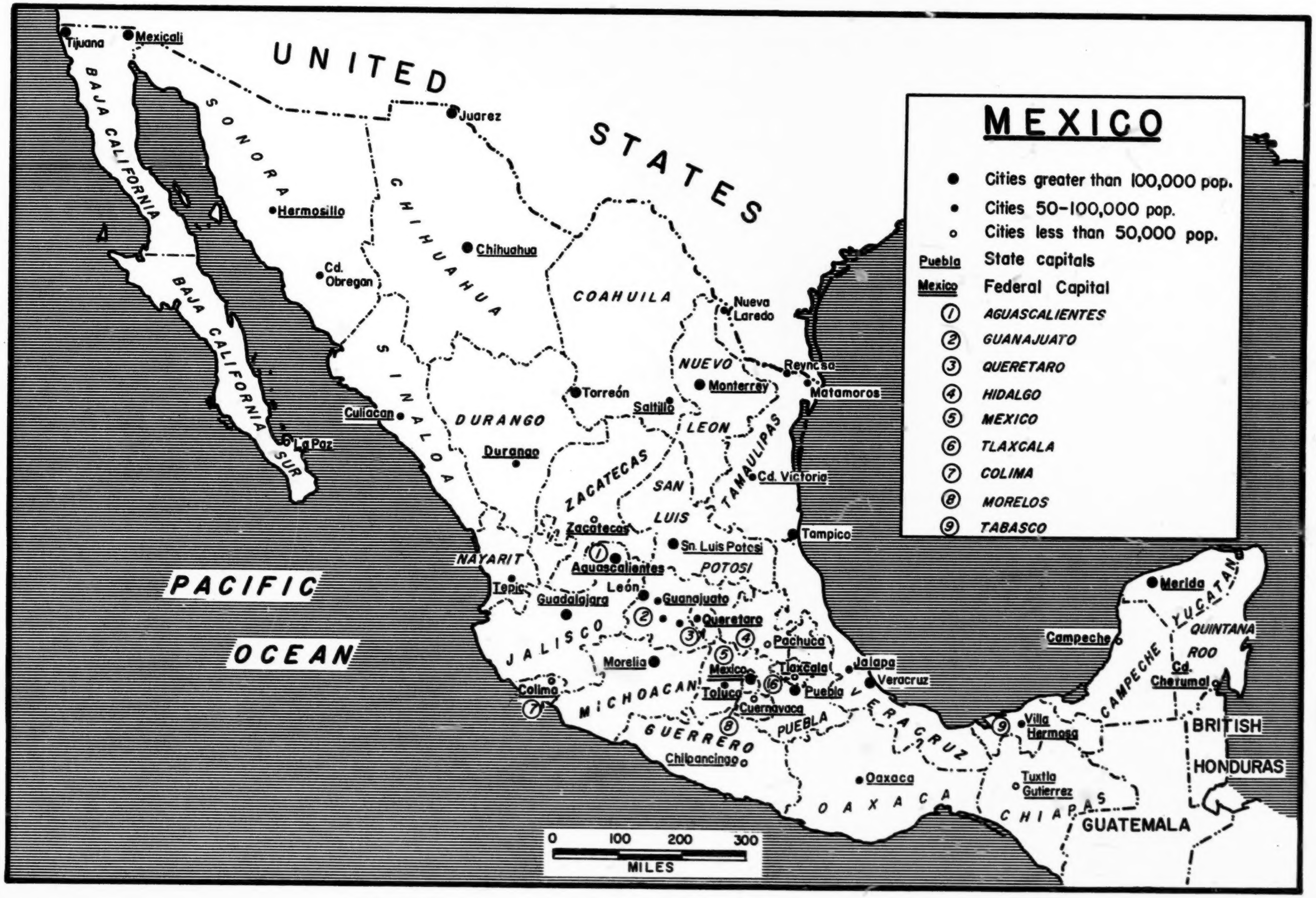

UNITED STATES
Elevations
0 to 500 Meters
500 to 1500 Meters
1500 to 3000 Meters
Over 3000 Meters
BRITISH HONDURAS
GUATEMALA

Fig. 3.--States and major cities of Mexico.


MEXICO
● Cities greater than 100,000 pop.
• Cities 50-100,000 pop.
○ Cities less than 50,000 pop.
Puebla State capitals
Mexico Federal Capital
① AGUASCALIENTES
② GUANAJUATO
③ QUERETARO
④ HIDALGO
⑤ MEXICO
⑥ TLAXCALA
⑦ COLIMA
⑧ MORELOS
⑨ TABASCO
UNITED STATES
PACIFIC OCEAN
BAJA CALIFORNIA
BAJA CALIFORNIA SUR
SONORA
CHIHUAHUA
COAHUILA
NUEVO LEON
TAMAULIPAS
SINALOA
DURANGO
ZACATECAS
SAN LUIS POTOSI
NAYARIT
JALISCO
MICHOACAN
GUERRERO
PUEBLA
VERACRUZ
OAXACA
CHIAPAS
CAMPECHE
YUCATAN
QUINTANA ROO
BRITISH HONDURAS
GUATEMALA
Tijuana
Mexicali
Juarez
Hermosillo
Cd. Obregan
Chihuahua
Nueva Laredo
Reynosa
Matamoros
Monterrey
Torreón
Saltillo
Culiacan
La Paz
Durango
Cd. Victoria
Zacatecas
Sn. Luis Potosi
Tampico
Aguascalientes
Tepic
León
Guanajuato
Guadalajara
Queretaro
Pachuca
Morelia
Mexico
Tlaxcala
Jalapa
Veracruz
Colima
Toluca
Puebla
Cuernavaca
Chilpancingo
Oaxaca
Villa Hermosa
Tuxtla Gutierrez
Campeche
Merida
Cd. Chetumal
0 100 200 300
MILES

identifies the states and major cities of Mexico, and Figure 4 shows the geographic patterning of scores on Factor 1 of Matrix D.

The dominant physical features of the Mexican landscape are the two mountain ranges, the Sierra Madre Oriental on the east coast and the Sierra Madre Occidental flanking the west coast. The topography of the central plateau varies from large flat plains in the north to hilly areas in the center. The level land in the plateau supports the largest rural population, because of its fertile soil, ease of tillage, and rainfall. However, on indexes of development the central area has an equivocal position, containing both the largest cities and some highly rural states. The north-central area is fairly level but has a semi-arid climate; rainfall averaged less than twenty inches and except where there is irrigation or mining, people are supported by grazing livestock. The lands developed in the north are planted with cotton for export, maize, and wheat. The north has been the beneficiary of the greatest efforts in irrigation, and these sites have been developed with the more modern agricultural techniques. The northern part of the country has sparsely inhabited rural districts, the larger proportion of the population residing in urban areas.

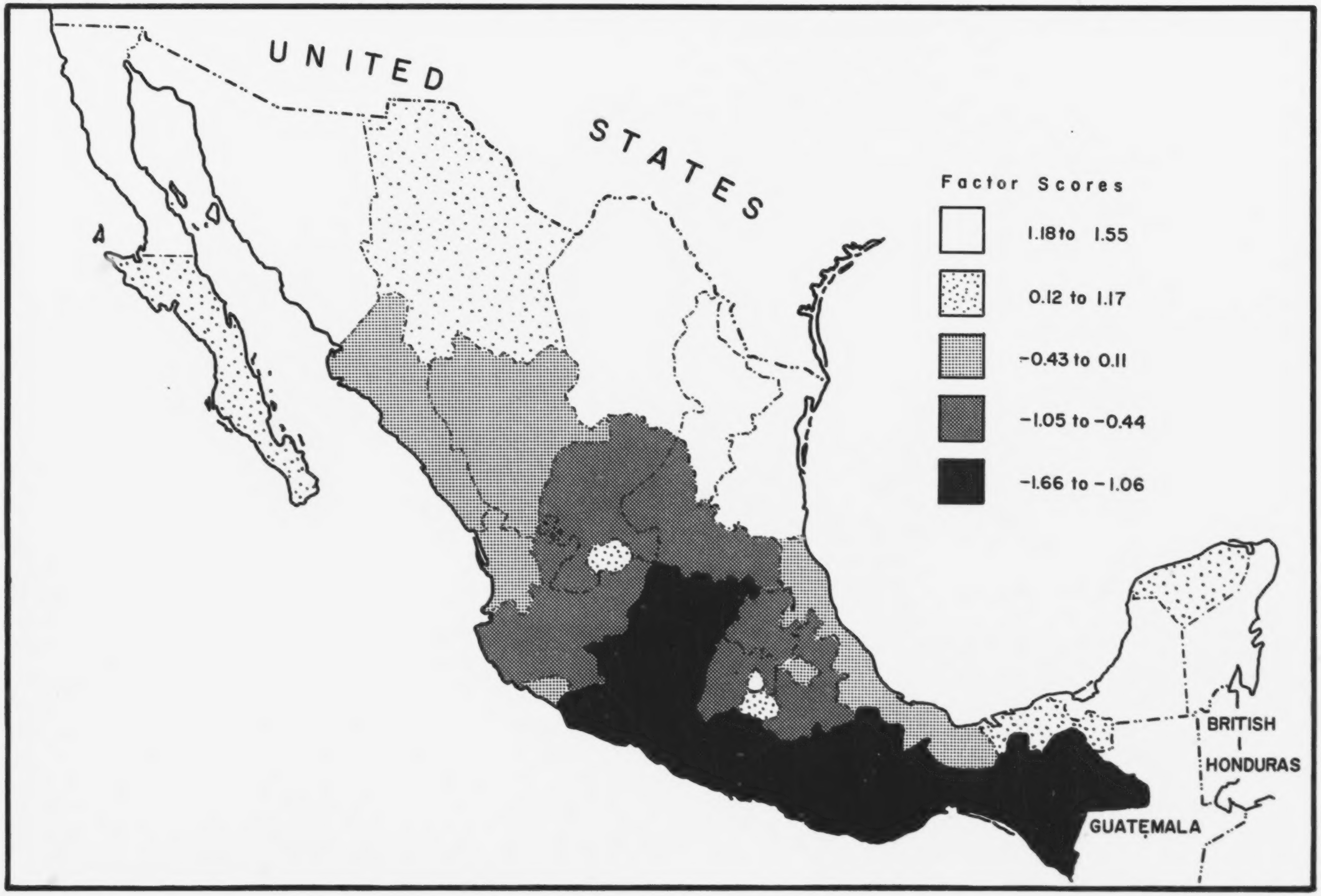
In the tropical lowlands of the southeast, the rainfall patterns make farming difficult except for "plantation crops" of sugar, bananas, rubber, and cocoa; hence the rural population is as scanty as in the dry north.

The Rio Grande which borders Texas is the major river in Mexico. Although many rivers flow from mountains to both coasts, most have little economic value; for part of the year they may be completely or almost dry. Papaloapan in Veracruz perhaps contributes the most economically. There are few lakes of commercial value; the two most important are Lake Chapala in Jalisco and Lake Patzcuaro in Michoacan. Lack of natural water resources makes irrigation projects essential for maximum productivity of land.

Fig. 4.--Matrix D, Factor 1.

Variable Number		Factor Loadings (±.800 and Above)
39	Movies/Pop 1940	.822
64	Collar/EcAct M 1940	.883
67	Collar/EcAct F 1940	.838
70	Clerk/EcAct T 1960	.866
140	Literacy 10+ T 1940	.900
141	Literacy 10+ T 1960	.852
157	Literacy 10-14 M 1940	.950
158	Literacy 10-14 F 1940	.920
238	Adult 30+ 7+ Sch M 1960	.851
266	Enrol 6-14 T 1960	.803
348	Age 10 Gr 1 MR 1963	-.815
360	Age 10 Gr 1 FR 1963	-.850

A short-cut estimate of the rank of the Federal District for these variables is 3.2 (from a high of 1 to 32).


UNITED STATES
Factor Scores
1.18to 1.55
0.12 to 1.17
-0.43 to 0.11
-1.05 to -0.44
-1.66 to -1.06
BRITISH HONDURAS
GUATEMALA

Population Distribution and Urban Structure

Population density in itself, as was pointed out before, does not differentiate the modernized from the isolated areas. A densely settled area may be industrialized and urbanized or it may be agricultural, its local centers having a minimum of outside contacts. Density per square kilometer does not indicate how skillfully the people use land. However, the way population density is associated with indices of agricultural development or with urbanization and communication can tell us about the conditions under which density is a factor in development. In Table 3 (the factors in modernization) population density had a moderately high negative loading.

There is wide variation in density from one state to another; excluding the Federal District, in 1940 the range was from 55.6 to .4 and in 1960 from 88.6 to 1.1 people per square kilometer. The geographic pattern is clearly displayed on Figure 5. States having the highest density in 1960 (Tlaxcala, Mexico, Morelos, Puebla, Guanajuato, Hidalgo, Aguascalientes, Veracruz, and Michoacan) are predominantly in the center. Hidalgo and Michoacan have high proportions of males in agriculture. The states having the most sparse populations were predominantly to the north (Baja California Sur, Sonora, Chihuahua, Coahuila, Durango, Baja California Norte) and close to the extreme eastern tip of the country (Campeche and Quintana Roo).

Density shows low correlations with other measures of population concentration (Table 4); the relationship to urbanization was negative except for size of capital city. The states with the largest capitals had the highest densities in 1940 (.294), but that relationship did not hold for 1960. Density also showed a negative relationship to proportions of in-migrants (-.499 in 1940) and to

Fig. 5.--Population distribution and city size, 1960.

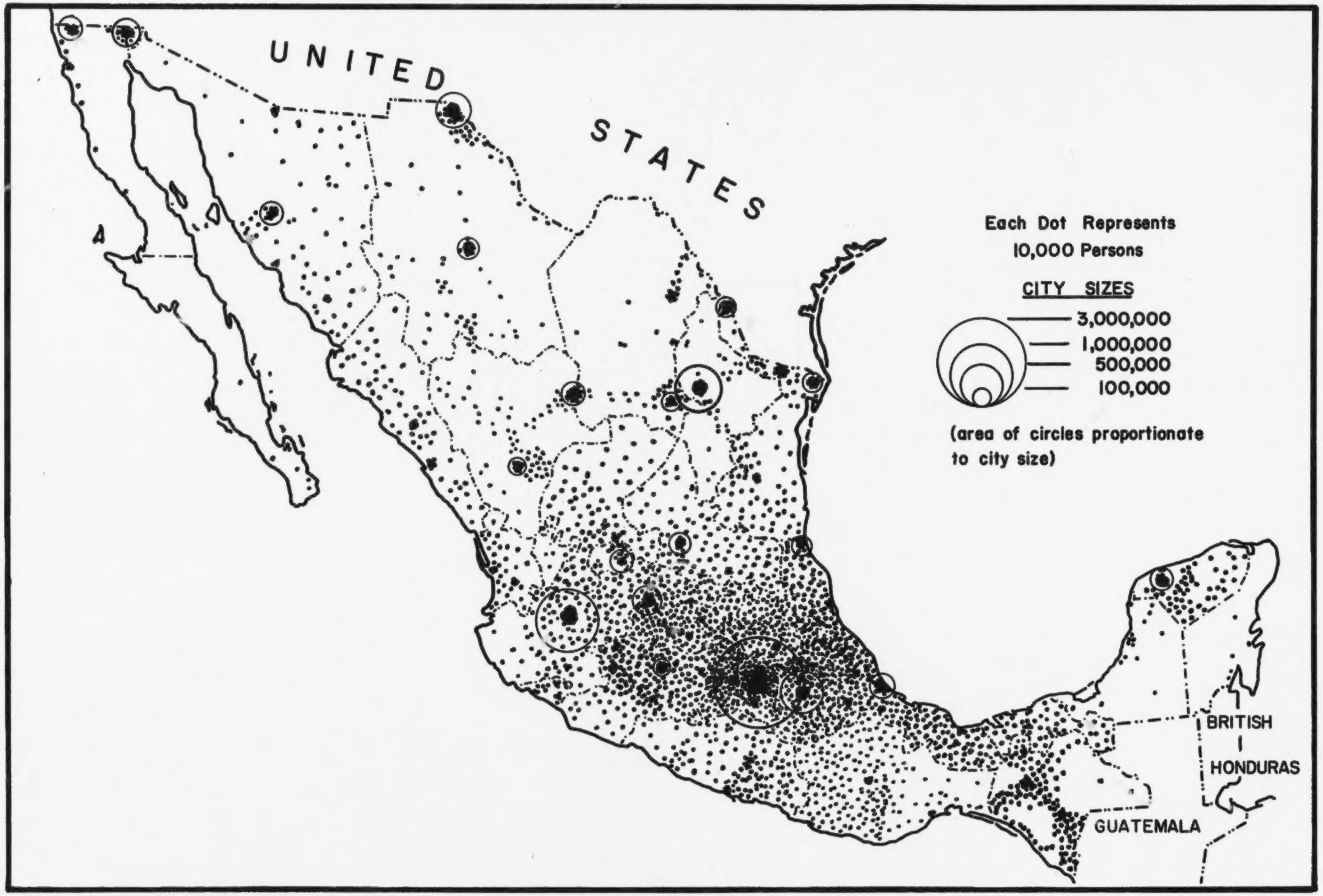

UNITED STATES
Each Dot Represents
10,000 Persons
CITY SIZES
3,000,000
1,000,000
500,000
100,000
(area of circles proportionate to city size)
BRITISH HONDURAS
GUATEMALA

TABLE 4

CORRELATIONS OF VARIABLES DESCRIBING POPULATION DISTRIBUTION

		Density		Urban			
		1940	1960	1930	1940	1950	1960
	Variable Number	1	2	3	4	5	6
1	Density 1940	1.000					
2	Density 1960	.974	1.000				
3	Urban 1930	-.322	-.260	1.000			
4	Urban 1940	-.250	-.192	.981	1.000		
5	Urban 1950	-.197	-.112	.943	.955	1.000	
6	Urban 1960	-.188	-.093	.907	.923	.977	1.000
7	Capital/dummy 1960	-.086	-.071	-.039	-.075	-.067	-.053
8	Capital/urban 1940	-.315	-.289	.292	.287	.211	.153
9	Capital/urban 1960	-.375	-.373	.328	.307	.199	.154
10	Capital size 1940	.294	.258	.256	.287	.245	.268
11	Capital size 1960	.077	.101	.344	.340	.351	.408
12	Pop. 50,000+ 1960	-.156	-.052	.615	.599	.600	.631
15	In-migrants/residents 1940	-.499	-.365	.577	.555	.575	.560
16	In-migrants/residents 1960	-.556	-.374	....	.457	....	.517

TABLE 4--Continued

Capital Dummy	Capital/Urban		Capital Size		Pop. 50,000+	In-migrants/ Residents	
1960	1940	1960	1940	1960	1960	1940	1960
7	8	9	10	11	12	15	16
1.000							
.547	1.000						
.571	.943	1.000					
.239	.185	.238	1.000				
.351	.194	.281	.914	1.000			
-.029	.236	.297	.482	.638	1.000		
-.031	-.363	.292	-.141	.054	.469	1.000	
....	-.382	.297	-.240	.017	.440	.855	1.000

growth in urbanization. However, by 1960, as we shall see later, density variables began to pick up some of the modernizing elements.

Defining urban populations as people living in localities of 2,500+, the 1960 census showed just over half (50.5 per cent) of the total population to be urban. In 1960, the states having the highest proportions of their population in communities of 2,500 or more were: Federal District; Baja California Norte in the northwest; Nuevo Leon, Coahuila and Tamaulipas in the northeast; Jalisco in west-center; and Yucatan and Campeche on the eastern peninsula. The least urban states were in the center and middle south (Hidalgo, Oaxaca, Chiapas, Guerrero, Tabasco, and Zacatecas). Of the most urban states, Campeche, Coahuila, Baja California Norte, and Tamaulipas were the least densely populated. The states with the highest proportions urban in 1960 had been most urban in 1930. There was very little correlation between the proportions of the population urban and the share of the capital city in the urban population. As we should expect, the more urban states were drawing migrants from other areas, although the highest urbanization-migration correlation which was for 1960, was only .517.

Cities vary in size, they differ in the proportion of the total urban population of the state they contain, they differ in the functions they perform, and in relationships to surrounding areas. A city may be the primary one, dominating by its size and influence, or it may be only one of several substantial population centers of the state. In 1960, there were thirty-eight Mexican cities with populations of 50,000 or over. Three of these (Mexico City, Guadalajara, and Monterrey) accounted for three-fifths of the total population living in urban centers of over 50,000. Guadalajara contain 30 per cent of the population of Jalisco, and Monterrey include 56.5 per cent of that of Nuevo Leon. Excluding the Federal District, in 1960 the only city other than Monterrey to contain more than 50 per cent of the state population was Aquascalientes.[1] The correlation between proportions of a state's population living in cities of 50,000 or more and the percentage of the urban populations living in the capital city in 1960 was only .297 (Table 4). As we should expect, size of capital city showed a moderate association with proportion living in cities of 50,000 or more (.638) and with urbanization in 1960 (.408).

Urbanization and Occupation

Specialization and literacy are two aspects of the modernization of occupational structures, and each is associated with urbanization. Thus, as Table 5 shows, there are moderate or even high correlations between proportions of the economically active population in white-collar, clerical, and professional employment and proportions living in urban places (of 2,500 or more). The correlation for white-collar males in 1960 is the highest (.860); it is stronger for both males and females in 1960 than in 1940. Higher proportions in these occupations are also associated, again as we should expect, with net in-migration. States that stand out in proportions in white-collar occupations together with proportions living in cities of 50,000 or over are Baja California Norte, the Federal District, Nuevo Leon, Aguascalientes, and Tamaulipas.

As already noted, the over-all population density in a state runs counter to the urbanization indexes. High density, especially in 1940, was positively associated with proportions employed in agriculture and described primarily rural settlement patterns, though by 1960 relations between density and urban developments were becoming more important. The negative relations between 1940 density and proportions of both males and females in white-collar

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[1] Walter Thompson de Mexico, S.A., The Mexican Market (Mexico: Walter Thompson de Mexico, S.A., 1961), p. 18.

TABLE 5

CORRELATIONS BETWEEN URBANIZATION AND OCCUPATION VARIABLES, 1940 AND 1960

	Density	Urban 2,500+	Capital/ Urban	Capital Size	Pop. 50,000+	In-migrants
			1940			
EcAct. F 10+	-.016	.463	.341	.295	.282	.347
EcAct F 1960-1940	....	-.305	-.206	-.096	.022	.004
Collar/EcAct M	-.624	.763	.503	.049	.541	.750
Collar/EcAct F	-.726	.586	.211	-.037	.545	.671
Collar/EcAct M 1960-1940	....	.683	.113	.547	.756	.372
Collar/EcAct F 1960-1940	....	-.002	-.220	.480	.054	-.328
Public administration/EcAct M	....	.522	.485	-.247	.252	.668
Mfg/EcAct M	.068	.821	.297	.401	.506	.264
Mfg F/M+F Mfg	-.049	-.242	.062	.316	-.136	-.296
			1960			
EcAct F 12+	.058	.210	.162	.148	.124	.429
Collar/EcAct M	-.269	.860	.395	.506	.732	.611
Collar/EcAct F	-.191	.820	.170	.521	.722	.426
Collar/EcAct M 1960-1940	.083	....	....	....	....	....
Collar/EcAct F 1960-1940	.786	....	....	....	....	....
Clerk/EcAct M	-.494	.753	.445	.397	.659	.673
Clerk/EcAct F	-.490	.739	.346	.446	.695	.578
Prof/EcAct M	-.238	.666	.357	.404	.546	.568
Prof/EcAct F	-.263	.587	.272	.089	.242	.123
Mfg/EcAct M	.223	.713	.207	.515	.591	.240
Mfg F/M+F Mfg	.176	-.337	.013	.164	-.155	-.307

employment at that time are unambiguous: -.624 for males and -.726 for females (first column of Table 5), and this negative pattern, though damped, is repeated in the correlation for 1960 between density and proportions in clerical jobs. None of the other correlations with density are noteworthy excepting the very interesting high relationship between 1960 density and 1940 to 1960 change in the proportions of economically active females who were in white-collar employment (.786).

Urbanization and Agricultural Development

According to Cline, five crops took up five-sixths of the cultivated land and accounted for nearly three-fourths of the total value of farm production in 1957; they were maize, beans, wheat, coffee, and cotton.[1] Historically maize has been the major food crop and it remains so today. While it is the traditional crop of subsistence farming, a surplus is produced in the areas between Mexico City and Guadalajara and in Veracruz and Michoacan. Maize grown on irrigated land is quite a different crop from maize grown on subsistence farms. With the growth of large metropolitan centers, farming practices changed in the central states; the "extensive" planting of maize was supplanted by intensive grain culture, much of it for shipment to the cities. Within a radius of 150 miles of Mexico City, a dairy belt emerged, and sugar, rice, fruits, vegetables, and flowers were planted, while submarginal lands continue to be used for maize.[2]

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[1] Howard F. Cline, Mexico Revolution to Evolution 1940-1960 (London: Oxford University Press, 1962), p. 265.

[2] Edmundo Flores, "The Significance of Land Use Changes in the Economic Development of Mexico," Land Economics, XXXV (1959), 115-24.

Next to maize, wheat is the major cereal; it is grown in the north on irrigated land and in the west and center as well. Rice is grown commercially primarily in Sonora, with some harvested in Veracruz, Tabasco, and Michoacan. Industrial and export crops are cocoa and henequen, as well as cotton and coffee. Coffee plantations are limited to Chiapas and Veracruz. Henequen is grown chiefly on plantations in Yucatan. Tobacco is produced in Nayarit and Jalisco.

The planting of crops for industrial use, for export, and for urban consumer markets has been associated with the mechanization of agriculture. Modernization of the agricultural sector is reflected in relatively low percentages of the work force in agriculture, the application of machinery to farming, and rise of productivity beyond the subsistence level. The proportion of the population in agriculture who earn over 500 pesos monthly provides a simple if crude index of productivity. The value of farm equipment as a ratio to land value supplements information about farm size and composition of the agricultural labor force, providing another index of modernization and commercialization. Glick's index of "returns to the human agent" in agriculture was also used as a measure of productivity.[1]

In 1940, the proportion of males in agriculture in the states of Mexico (excluding the Federal District) ranged from 89 to 53 per cent of the economically active; the state with the lowest percentage still had over half of its active males in farming. By 1960, however, the percentage of farmers ranged from 80 down to 35 per cent. There are moderately high correlations between modernization of agriculture and urbanization (Table 6). For example, the association of mechanized farms in 1950 with proportions living in population centers of 2,500+ in 1960 is .664 and with the population living in cities of 50,000+ it is .561. Modern farms attracted laborers from out of state; the correlation between farm mechanization and in-migration was .692 and that between farm mechanization and proportions of the agriculturally employed who were laborers (not shown in the table) was .567. Low incomes in agriculture were associated with high population density (.619) in 1960 but with low urbanization, city primacy, and urban growth. Again, where returns to the human agent in agriculture increased between 1930 and 1950, there was a negative association with 1960 population density (-.529). High returns in agriculture were associated also with high migration into growing urban centers (.770). Contrasts between the traditional peasant farmers of the more densely settled rural areas, and the modernized agriculture in the dry and irrigated areas where scale is typically larger, workers are most fully literate, and innovative practices have been most important, come through very clearly in these relationships.

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[1] He arrived at his estimate of returns to the human agent by the following procedure. First, he estimated the value of land and capital employed in agriculture. He then assumed returns of 5 per cent and alternatively of 10 per cent on those values. The resultant estimates of returns to land and capital were subtracted from net farm income to get returns to the human agent as a residual. His estimates using the 10 per cent assumptions are the ones used in the study. Glick, op. cit., pp. 143-50.

Higher incomes were earned in farming in those states with the lowest proportions of men in agriculture. The percentages of the farmers earning under 500 pesos monthly varied from 48 to 96 per cent. However, the state ranking third highest (meaning fewer people earned low incomes) still had 71 per cent of its agricultural population earning less than 500 pesos monthly. The states with the highest proportions of their farming population earning incomes above 500 pesos monthly were Baja California Norte, the Federal District, Sonora, and Coahuila. Over 93 per cent of farmers had incomes below 500 pesos a month in Hidalgo, Tlaxcala, Yucatan, Oaxaca, Guerrero, Puebla, and Guanajuato.

TABLE 6

CORRELATIONS BETWEEN URBANIZATION AND AGRICULTURE VARIABLES

	Density		Urban 2,500+		Capital/ Urban		Capital Size		Pop. 50,000+	In-migrants	
	1940	1960	1940	1960	1940	1960	1940	1960		1940	1960
Ag/EcAct M 1940	.436	.388	-.903	-.803	-.402	-.464	-.234	-.328	-.625	-.635	-.537
Ag/EcAct M 1960	.269	.184	-.847	-.873	-.361	-.378	-.299	-.416	-.655	-.595	-.568
Ag/EcAct M 1960-1940	....	-.316	-.184	....	-.031	....	-.320	....	-.355	-.158	....
Ejidos/Ag Pop 1940	.208	.158	.100	.089	-.100	-.154	-.090	-.198	-.264	-.005	-.173
Ag Labor/Ag M 1940	.209	.247	-.207	-.134	-.083	-.180	-.138	-.161	-.148	.198	.072
Ag Labor/Ag M 1960	.072	.191	.284	.392	-.078	-.037	.060	.216	.379	.394	.416
Ag Prop/Ag M 1940	-.411	-.395	-.037	-.038	.087	.152	-.018	.127	.092	-.058	.138
Ag Prop/Ag M 1960	-.052	-.172	-.265	-.372	.091	.043	-.034	-.195	-.359	-.373	-.416
Ag Prop/Ag M 1960-1940	....	.072	-.184	....	.029	....	.006	....	-.341	-.260	....
Equip/Land 1950	.198	.260	.272	.342	-.298	-.205	.167	.264	.525	.350	.172
Farm mechanized 1950	-.484	-.376	.598	.664	.083	.097	-.069	.147	.561	.813	.692
Income over $500	-.729	-.619	.488	.551	.243	.324	-.114	.190	.503	.675	.736
Returns Glick 1950-1930	....	-.529	.234	....	.127	....	-.339	....	.256	.770	....

Using Glick's measure of returns to the human agent in agriculture (series B, 1950), the states achieving the highest productivity were predominantly northern and coastal whether to the west or on the Gulf. The interior central states and those across the south ranked very low on this index. Glick related farm-labor productivity to urbanization but did not find a clear association with labor-force characteristics. (An urban center may or may not be industrial in character, and location near a large city did not predict influences operating to induce or diffuse innovations and increased efficiency in agriculture.) In assessing the relationship between centers of development and farm labor productivity there seemed to be differing relationships in the north than in the center. The centers of development were Baja California Norte, Coahuila, Nuevo Leon, Tamaulipas, and the Federal District. In the northern states there was an expected graduation from the highest productivity in the lead areas to favorable located adjacent states and on to the "near periphery." However, in the development around the Federal District there was greater variation and a different pattern of diffusion. The increase in farm labor productivity was slowest in the "favorably located" or adjacent areas, greater on the periphery.[1] This finding points to the blockages of diffusion in the central area.

One outstanding feature of the Mexican agricultural system has been the redistribution of the land. In 1910, 1 per cent of the population owned about 97 per cent of the land. The land redistribution program after the Revolution was carried out in the spirit of social justice and only later did economic development become an important consideration. Three main types of status in agriculture were distinguished in 1940; ejiditarios (those who received land grants under the land reforms and were subject to associated constraints on inheritance and subdivision); agricultural proprietors; and agricultural laborers. The 1940 census emmerated ejiditarios separately; at that time they made up 42 per cent of the agricultural population. The 1960 census included them with proprietors.[1] The agricultural "proprietors" are defined for this study to include only farmers working their own lands without hired help, but for 1960 they include ejiditarios whereas for 1940 they do not. The majority are on properties of five hectares or less. Most of these small holdings operate at a subsistence level; general productivity and technology are low. Some of these proprietors engage in other activities part-time.

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[1] Ibid., pp. 34 and 44.

Agricultural laborers may be local day workers without regular employment who work on small and medium-size properties, they may be migrant workers following the harvest from one part of the country to another, or they may be employed regularly on plantations. Hired men made up 50 per cent of the agricultural labor force in both 1940 and 1960. The proportion of the agricultural population of an area who are laborers is in part an indication of the development of commercial farming, and hence it is to some degree associated with measures of rural modernization.

While the correlations between proportions of proprietors or laborers and urbanization were low, there were some interesting changes in relationships between 1940 and 1960 (Table 6). In 1940, the proportion of the agricultural labor force who were hired was negatively associated (-.207) with proportion of population in urban places, whereas in 1960 that association was postive, as was the association with proportions in cities of 50,000+ (.379). The proportion of males in agriculture who were proprietors in 1960 showed the opposite tendencies; a negative association with urbanization and with urban growth. The corresponding association of hired farm labor with in-migration reflects the geographic linkage of urban development with growth of mechanized farming and the spread of irrigation. Nevertheless, there was a strong negative association between population density and incomes in agriculture in both 1940 and 1960 (-.729 and -.619 in Table 6). Also factors of Matrices A, B, and D that describe agricultural structure give density a positive loading if the loadings are positive on hired farm labor, and vice versa. As columsn 4 to 7 of Table 3 show, the clusters involving agricultural structure include moderately high loadings on electricity, female labor force participation, and (in lesser degree) incomes in agriculture and in manufacturing. Factor 4 of Matrix A picks all of these up with signs that indicate relative modernization and economic advance in association with larger proportions of hired labor in the farm population. Factor 2 of Matrix B does the same thing but in reverse, picking out low-level agricultural development along with low incomes in manufacturing and low electricity consumption.

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[1] Stavenhagen estimates they made up 25 per cent of the agricultural population in 1960. Rodolfo Stavenhagen, "Aspectos sociales de la estructura agraria en Mexico," America Latina (Janeiro to Marco, 1966), p. 6.

Urbanization and Manufacturing

Since 1940 the industrial sector of the Mexican economy has expanded greatly; in 1945 it accounted for 18 per cent of the Gross National Product and in 1960 almost 26 per cent.[1] Much of the increase came from the expansion of iron, steel, sugar, cement, paper, chemicals, glass, and cordage industries.[2] In 1940 the range of economically active males in manufacturing was from 33.6 per cent (in the Federal District), followed by Neuvo Leon with 14.8 per cent, to a low of 4.0 per cent in Guerrero. In 1960 the percentages were 35.3 in the

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[1] Thompson, op. cit., p. 159.

[2] Cline, op. cit., p. 280.

Federal District, followed by 26.9 in Nuevo Leon to 3.9 in Guerrero. Other states having relatively high proportions of males in manufacturing in 1960 were San Luis Potosi (22.3 per cent), Aguascalientes (15.8), Tamaulipas (14.2), and Guanajuato (14.1). Low ranking states were Zacatecas (3.9 per cent), Chiapas (4.1), Oaxaco (4.8), Baja California Sur (6.2), Quintana Roo (6.5), Tabasco (6.6), Nayarit (6.9), and Durango (7.2).

There was a moderately close relationship between proportion of males in manufacturing and proportion of the population classed as urban (Table 7). In 1940, the relationship was stronger than in 1960 (.821 and .713 respectively). The correlation between proportions of economically active males employed in manufacturing and proportion of population in cities of 50,000+ was .591. In 1960, there was a correlation of .515 between large capital cities and proportion of males in manufacturing (in 1940 this relationship was .401). In general, where incomes in manufacturing were high, there was a relatively high proportion of male in-migrants (.738). These areas were less densely populated but also more urbanized. As of 1940, factories paying relatively well were likely to be in larger cities and to attract migrants from out of state, but these relationships were much lower in 1960.

Where the labor force in manufacturing is composed largely of females, it is typically less modern in character. Females are more likely to be employed in either household or light factory industries, in which productivity and income are low. In 1960, the correlation between the proportion of wage earners in manufacturing who received under 500 pesos a month and the proportion who were female was .494. The states with higher proportions of females in manufacturing were somewhat less likely to have in-migration of males (-.307).

Mexican manufacturing is heterogeneous, displaying a wide range in technological development and organization. The most primitive industries

TABLE 7

CORRELATIONS BETWEEN URBANIZATION AND INDUSTRIALIZATION VARIABLES

	Density		Urban 2,500+		Capital/ Urban		Capital Size		Pop. 50,000+	In-migrants	
	1940	1960	1940	1960	1940	1960	1940	1960	1960	1940	1960
Mfg/EcAct M 1940	.068	.104	.821	.775	.297	.335	.401	.404	.506	.264	.206
Mfg/EcAct M 1960	.163	.223	.661	.713	.215	.207	.499	.515	.591	.300	.240
Mfg/EcAct M 1960-1940	....	....	.203	....	....	....	....	....	.441	.162	....
Mfg F/M+F Mfg 1940	-.049	-.125	-.242	-.238	.062	.099	.316	.276	-.136	-.296	-.264
Mfg F/M+F Mfg 1960	.214	.176	-.337	-.337	.001	.013	.222	.164	-.155	-.422	-.307
Mfg Inc. over $500 1960	-.550	-.428	.421	.527	.209	.257	-.048	.226	.554	.706	.738
Pay/Emp Fact 1940	-.140	-.110	.124	.147	-.022	.001	.266	.331	.500	.400	.222
Pay/Emp Fact 1955	-.169	-.123	.144	.152	-.272	-.238	.074	.159	.281	.259	.221
Pay/Emp 1955/1940	....	.050	.233	....	....	....	....	....	-.064	.005	....
Mining/EcAct M 1940	....	-.292	.137	....	-.311	....	.178	....	.266	.128	....

making objects for home use and a surplus for the local market (however many people they employ) do not signal development. In transitional society, articles may be elaborated by hand that are produced by machine in advanced countries. This kind of processing can reach a large scale, nevertheless, as in the shoe industry in Leon, glass blowing in Puebla and Tlaxcala, and fruit canning in Bajio.[1] According to Myers:

> The manufacturing sector is comprised of a small number of highly capitalized large establishments that employ a relatively small percentage of the industrial labor force. The remainder include small or middle-sized establishments and the shops of artisans in which techniques are often stubbornly traditional and personnel administration is usually based on family relationships. A recent survey showed that large plants, representing 3.1 per cent of the total number of establishments and employing 26.5 per cent of the industrial labor force, accounted for more than 40 per cent of the value of output and more than 50 per cent of the capital equipment in this sector. Small and middle-sized firms representing 55 per cent of factories employed 65.3 per cent of the labor and 46.3 per cent of the capital equipment and accounted for 55.5 per cent of production. The remaining capital and labor were employed in the shops of artisans, 41.9 per cent of total units, which accounted for only 3.5 per cent of the total value of output.[2]

Four maps (Figures 6 to 9) describe industrial location patterns in Mexico.[3] These are based on information from a Mexican source which classified industries into three large groups: "basic," "vital," and "secondary." Twenty industries were included, eliminating those that appeared to be of a workshop type or represented the indigenous economy such as traditional bakeries or mills for grinding maize. Basic industries were defined as those manufacturing machinery and equipment or vehicles that were of "essential importance for the industrial or agricultural development of the country"; they were the main

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[1] Jorge L. Tamayo, Geografia General de Mexico, Vol. IV: Geografia Economica (Mexico: Instituto Mexicano de Investigaciones Economicas, 1962), p. 468.

[2] Myers, op. cit., pp. 19-20.

[3] The maps were adapted from: Fernando Zamora (ed.), Diagnostico Economico Regional (Mexico: Secretaria de Economia e Instituto Mexicano de Investigaciones Economica), pp. 140-50.

Fig. 6.--Industrial concentrations and locations of selected basic industries I, 1957.

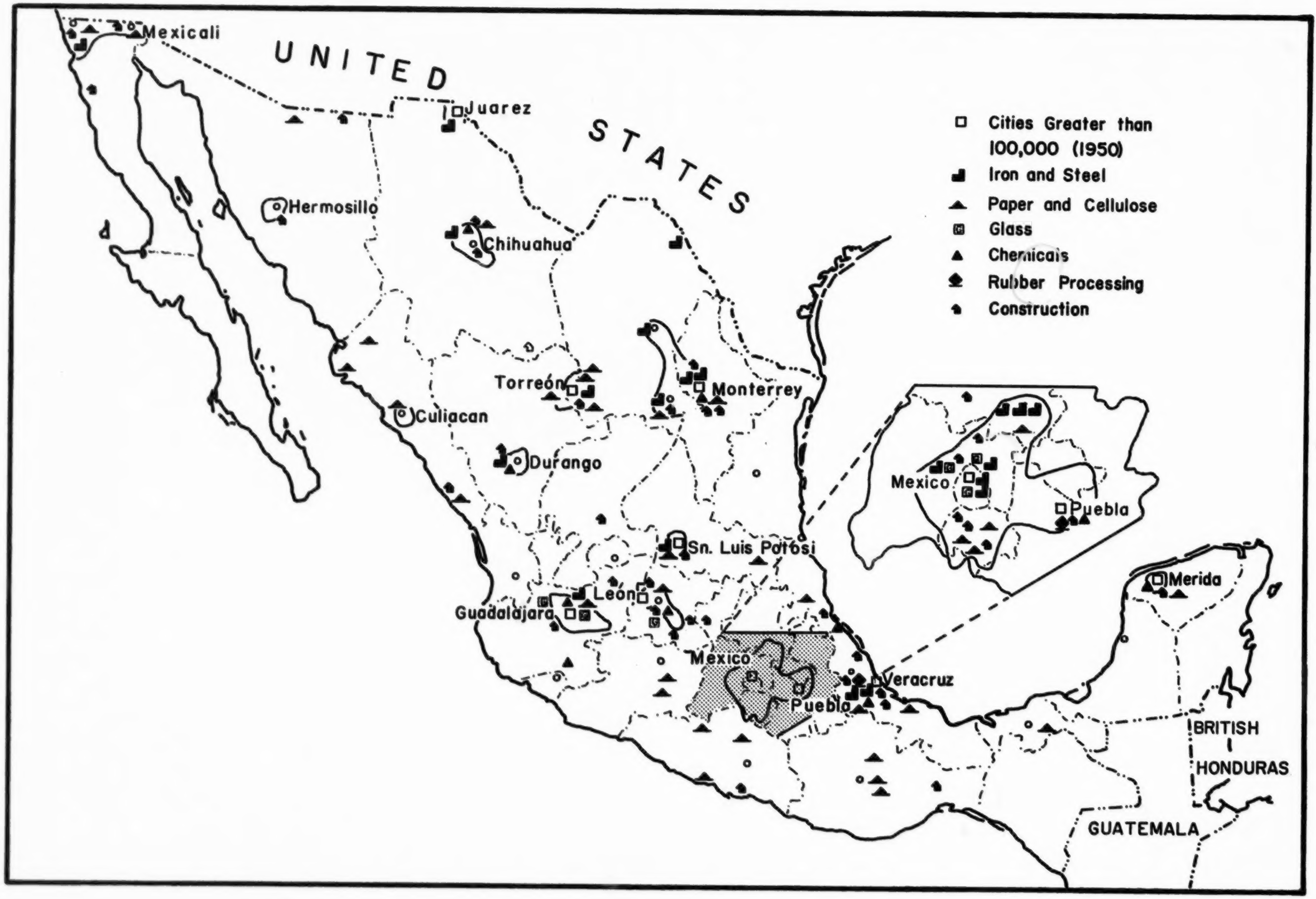

Cities Greater than 100,000 (1950)
Iron and Steel
Paper and Cellulose
Glass
Chemicals
Rubber Processing
Construction
UNITED STATES
Mexicali
Juarez
Hermosillo
Chihuahua
Torreón
Monterrey
Culiacan
Durango
Sn. Luis Potosi
León
Guadalajara
Mexico
Puebla
Veracruz
Merida
BRITISH HONDURAS
GUATEMALA

Fig. 7.--Industrial concentrations and locations of selected basic industries II, 1957.

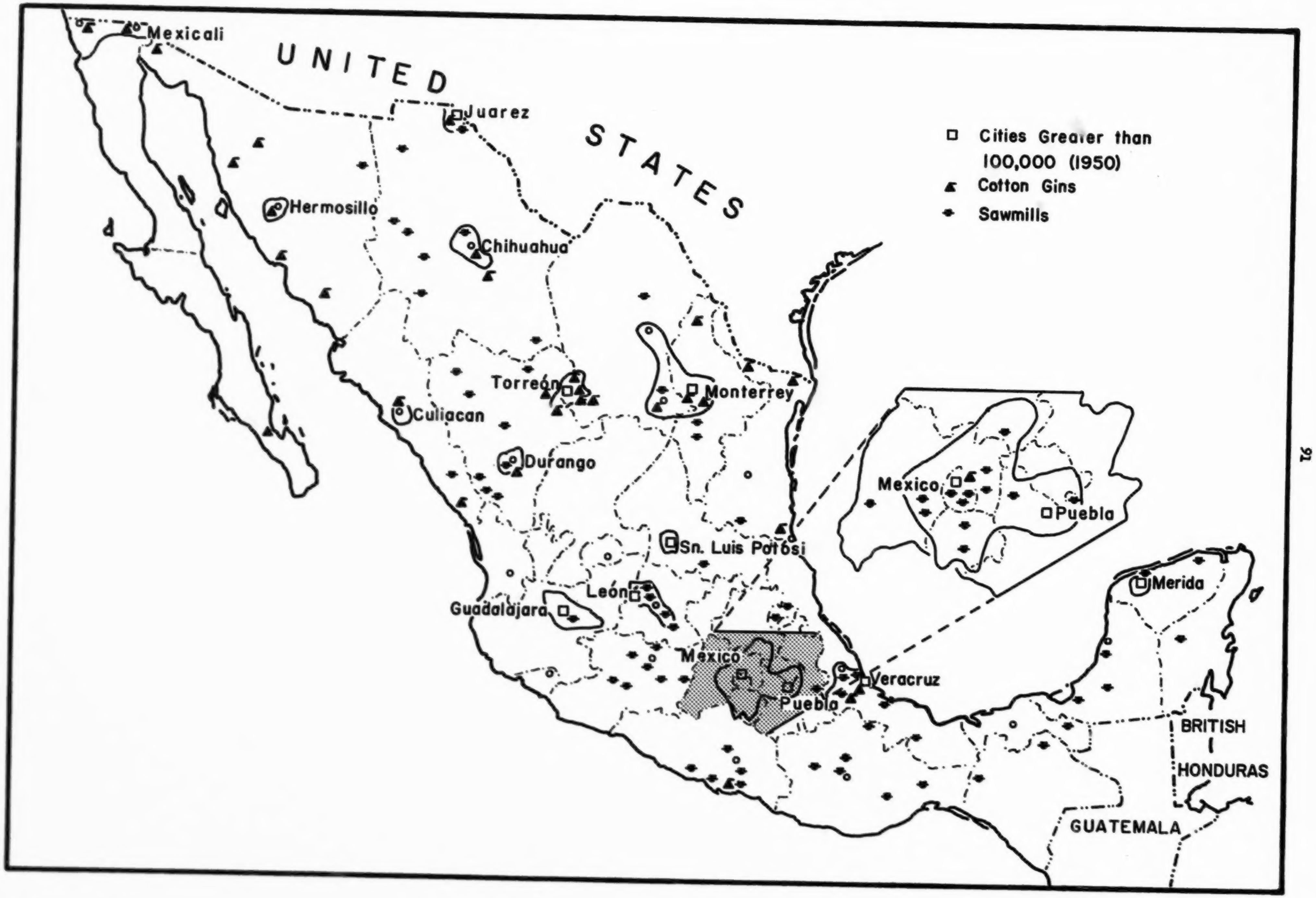

UNITED STATES
Cities Greater than 100,000 (1950)
Cotton Gins
Sawmills
Mexicali
Juarez
Hermosillo
Chihuahua
Torreón
Monterrey
Culiacan
Durango
Sn. Luis Potosi
León
Guadalajara
Mexico
Puebla
Veracruz
Merida
BRITISH HONDURAS
GUATEMALA
Mexico
Puebla

Fig. 8.--Industrial concentrations and locations of selected vital industries I, 1957.

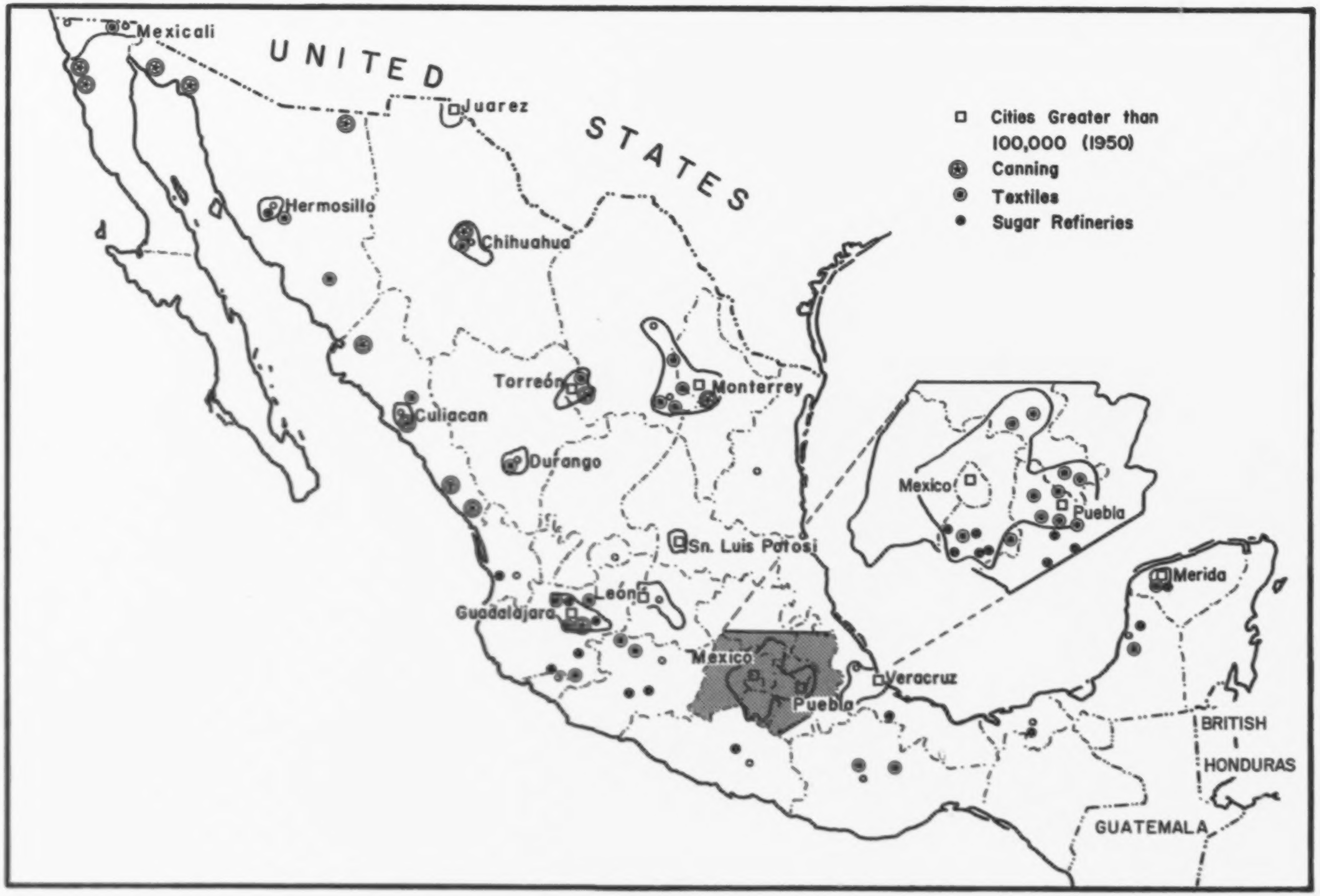
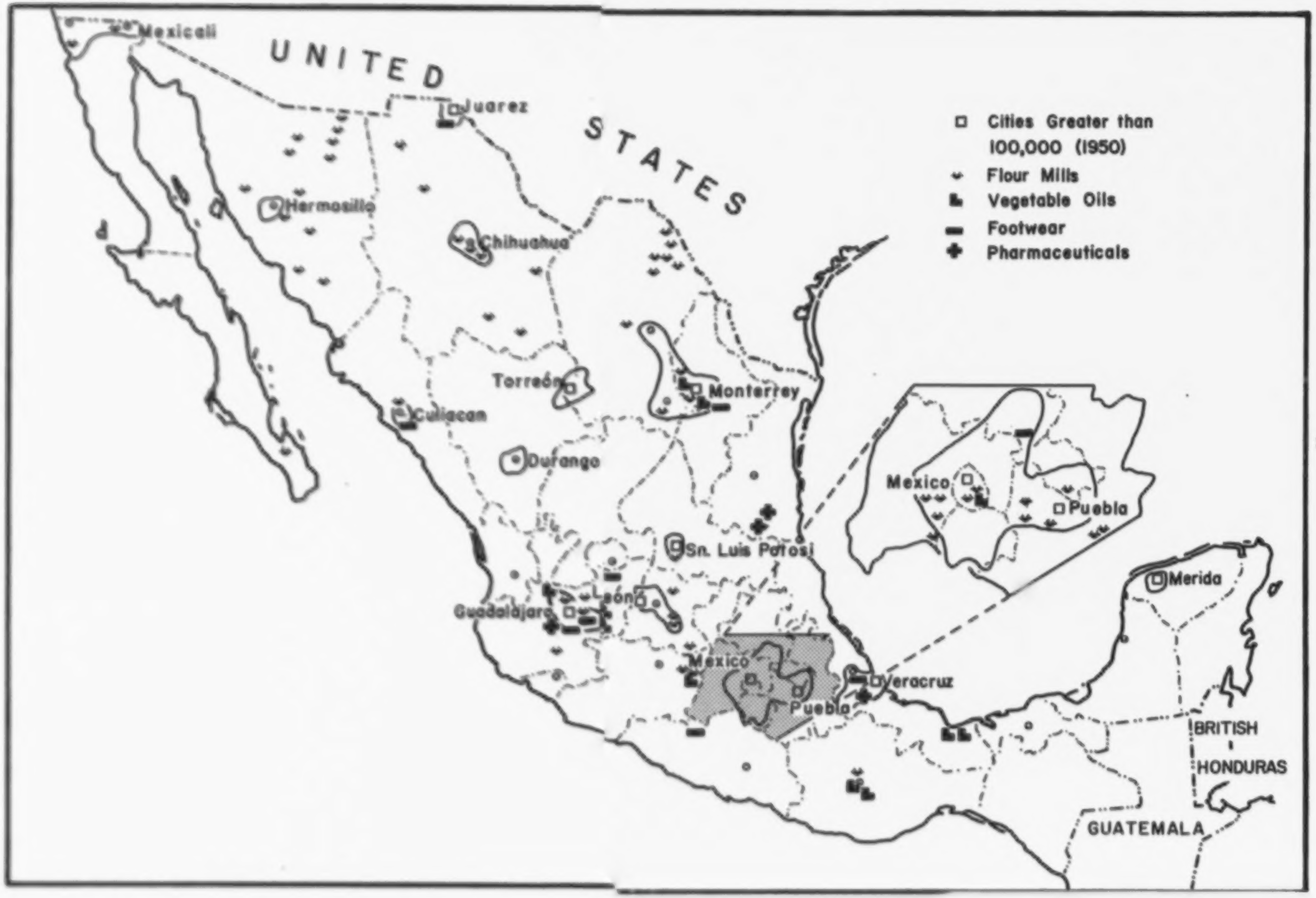

□ Cities Greater than 100,000 (1950)
Canning
Textiles
Sugar Refineries
UNITED STATES
Mexicali
Juarez
Hermosillo
Chihuahua
Torreón
Monterrey
Culiacan
Durango
Sn. Luis Potosi
León
Guadalajara
Mexico
Puebla
Veracruz
Merida
BRITISH HONDURAS
GUATEMALA

Fig. 9.--Industrial concentrations and locations of selected vital industries II, 1957.


UNITED STATES
□ Cities Greater than 100,000 (1950)
Flour Mills
Vegetable Oils
Footwear
Pharmaceuticals
Mexicali
Juarez
Hermosillo
Chihuahua
Torreón
Monterrey
Culiacan
Durango
Sn. Luis Potosi
León
Guadalajara
Mexico
Puebla
Veracruz
Merida
BRITISH HONDURAS
GUATEMALA

capital goods industries. The "vital" industries were those that transform raw materials or the products of basic industry into consumer goods. "Secondary" industries are not included in the accompanying maps; they were light industries that produced such products as beer, cigarettes, beverages, alcoholic drinks, and matches.[1]

The most noticeable features of the maps are the concentrations in the center and in Nuevo Leon and Coahuila; this is especially marked for the basic capital goods, which are more tightly clustered around major cities than are the "vital" industries. On the other hand, the maps show that industries in the early stages of processing tend to locate close to raw materials. Comparing the location of the cotton gins (Figure 7) with the location of textile mills (Figure 8) shows the earlier process to be more dispersed and closer to the growing regions (in Sonora, Durango, Coahuila, and Nuevo Leon). Textile manufacturing is found in the same areas as the initial cotton processing, but also in the Puebla area, Michoacan, and Jalisco. The distribution of sawmills, which are almost ubiquitous, can be compared with paper and cellulose manufacturing to emphasize the wider distribution of the former. Sugar refining (Figure 8) is confined to the sugar-growing area across the center of Mexico and southeast, while food preservation is found in association with relatively dense agricultural settlements and consumer markets, closely matching the population dot map. Flour mills are, of course, located in wheat-growing areas.

Throughout most of the north and northwest, three-fourths or more of 1957 manufacturing production is outside of the major urban clusters outlined on the maps. Though industrial production was growing rapidly in these areas, more than doubling the national rate of expansion, it was oriented primarily to utilization of agricultural products of the region. At the other extreme, the Monterrey, Saltillo, and Montclova industrial grouping represents a concentration of 90 per cent of the total industrial output for its region. In the central region, which generated about 40 percent of the 1957 total national production, about 80 per cent was concentrated in the urban clusters; however, the pace of industrial development has been somewhat lower than in the north, and this central area is marked by the coexistence of modern industries and the artisan type.

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[1] The secondary industries were eliminated in the adaptations for maps, in this study, although they appear in the Diagnostico Economico Regional and are discussed in Tamayo, op. cit., pp. 488-507.

In the Pacific South there is hardly any industrial concentration--only a few dispersed raw material processing enterprises. Because of the low levels of manufacturing production there, any meaningful increase in production gives very high rates or change. In the Gulf region over half the industry is dispersed. In Yucatan, Campeche, and Quintana Roo, 70 per cent of the regional output is widely scattered. However, areas of high local population density coincide with these industrial groupings.

The industries that are widely dispersed and are based on processing of raw materials are likely to be less highly capitalized than those clustered around the major cities. Those that produce for wider markets do, however, promote contact of the regional subcultures with the national society, even when the products and processes are traditional. The more advanced industries, concentrated around a few major cities, require a large pool of skilled labor, adequate electrical and gas services, and good transportation and communication facilities.

Cultural Characteristics and Urbanization

The cultural characteristics included in the study can be viewed as measures of social isolation. The habits of food and dress indicate the extent of "marginality" of the indigenous population, and changes in these habits often are considered evidence of the adoption of an "urban life style." In 1940, the proportion of a state's population not eating wheat bread ranged from 5 to 80 per cent. In 1960, the range in percentages not eating wheat bread was from 5 to 67 per cent. The proportion of males walking barefoot varied in 1940 from 1 to 72 per cent and in 1960 from 2 to 48 per cent.[1] "Indigenous habits" are intercorrelated: walking without shoes accompanies sleeping on the floor and not eating wheat bread. States with the highest proportions walking barefoot and not eating wheat bread were in the central part of the country and in Guerrero on the Pacific; those most "modernized" in these respects were the northern tier of states together with the Federal District. This again points to the variations among the central states, where sophisticated city life coexists in close spatial proximity to, yet separate from, indigenous culture.

Although the populations that adhere to indigenous ways are not exclusively rural, there are moderately high negative correlations between such traditionalism and degree of urbanization. The 1960 correlations with proportion of the population walking without shoes were -.653 for proportions living in towns of 2,500+ and -.688 for proportions in cities of 50,000+ (Table 8).

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[1] Note that the lowest percentage in 1940 was below the lowest in 1960. In both cases the state was Baja California Norte; the slight increase there between 1940 and 1960 probably reflects the characteristics of recent inmigrants.

TABLE 8

CORRELATIONS BETWEEN PROPORTIONS OF MALES WALKING BAREFOOT AND IN AGRICULTURE, AND URBANIZATION VARIABLES

	Barefoot/Males		Agriculture/EcAct. Males	
	1940	1960	1940	1960
Density				
1940	.318	.394	.436	.269
1960	.245	.328	.388	.184
Urban 2,500+				
1940	-.634	-.662	-.903	-.847
1960	-.628	-.653	-.803	-.873
Pop. 50,000+ 1960	-.667	-.688	-.625	-.655
Capital/urban				
1940	-.162	-.149	-.402	-.361
1960	-.231	-.208	-.464	-.378
Capital size				
1940	-.253	-.196	-.234	-.299
1960	-.414	-.342	-.328	-.416
In-migrants				
1940	-.624	-.587	-.635	-.595
1950	-.599	-.563	-.608	-.607
1960	....	-.504	-.537	-.568

Two factors described culture and sex differences (Table 3). Matrix A, Factor 2, had high positive loadings on males walking barefoot in 1940 and on changes in this trait between 1940 and 1960; there were positive loadings for large differences between males and females in literacy in both rural and urban areas (1960) and negative loadings for sleeping on a bed (1940). There were negative loadings also on pass rates of youth in primary school in both rural and urban areas and on traits associated with modernized agriculture.

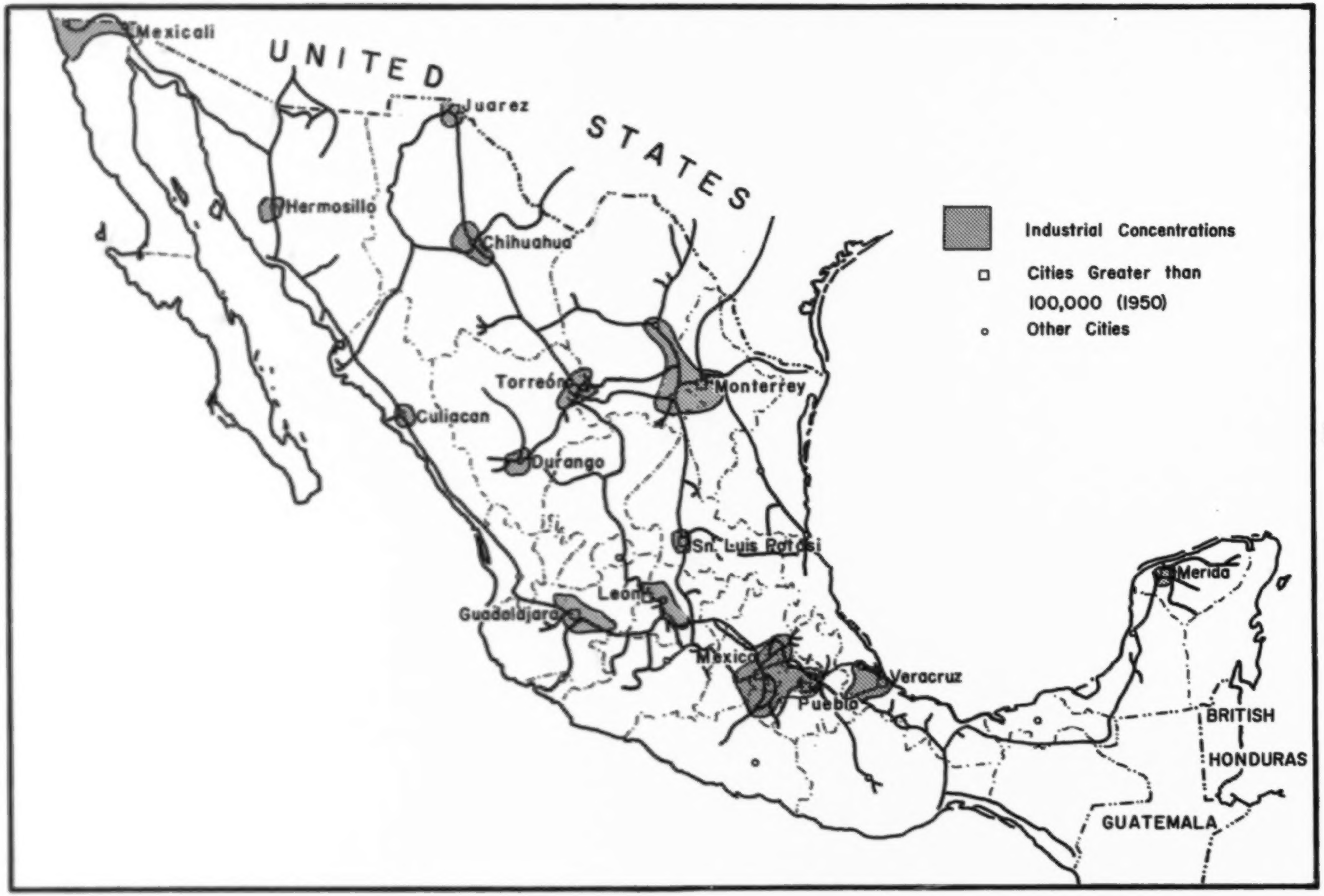
A similar factor (Matrix D, Factor 2, mapped later as Figure 15) had high positive loadings on "population walking barefoot," on literacy differences between young and middle-aged females in both rural and urban areas, and on sex differences in literacy. These factors again describe essentially backward rural areas. The reduction in the proportions of males walking barefoot between 1940 and 1960 and the notable progress in literacy of young girls compared with the middle-aged women points to a lagging rural setting that is now undergoing change.

Transportation and Communication Systems

The extent of the transportation and communication systems is an indication of accessibility within a country. The national network of roads and railroads tells something about the complexity of the economy and the size of the market. The railroads in Mexico were built during the initial stages of industrial development in the early 1900's. The main lines run north and south with one transverse line; Mexico City is a nucleus in the railway system and people or goods travelling across regions must usually be routed through that city. While the railroad branches run north and south, it is difficult to build branches to smaller places. Figure 10 shows how the railway network connects the areas of industrial concentration.

The principal highways also run mainly north and south, often parallel to the railroads. The modern highway and road networks have been built mainly since World War II. The goal to create the main trunk roads as Federal highways, and then to complete more extensive secondary and feeder

Fig. 10.--The railway network and industrial concentrations.


Industrial Concentrations
Cities Greater than 100,000 (1950)
Other Cities
UNITED STATES
Mexicali
Juarez
Hermosillo
Chihuahua
Torreón
Monterrey
Culiacan
Durango
Sn. Luis Potosi
Leon
Guadalajara
Mexico
Puebla
Veracruz
Merida
BRITISH HONDURAS
GUATEMALA

roads to open up isolated areas. Figure 11 depicts the highway system. In sparsely populated areas there is a closer relationship between railroad and road kilometers per capita than in densely populated areas. However, measures of railroad or road mileage in relation to population or area tell little about the uses people make of the available transportation.

In Table 9 there is a negative correlation of -.654 between railroad mileage per square kilometer of area and relative recency of urban growth whereas road mileage per capita is positively associated with recency of expansion of urban places. This is a clear reflection of the fact that Mexico has experienced two major spurts in communications and economic life. The spread of automobiles is an important element in the present phase, reflected in the high correlation of autmobiles with urbanization; but equally important is the increasing use of buses, which have contributed to the habit of travel in the rural areas and bring rural visitors (and migrants) to the cities. Intercorrelations between transportation facilities, males in agriculture, and males walking barefoot (Table 10) emphasize the remoteness of much of the rural population in 1940, but by 1960 the relationship between proportions of males barefoot and road mileage per capita had loosened considerably, suggesting that as roads began to penetrate the more remote areas, the available measures no longer distinguished "backward" areas. Table 10 is interesting also for the behavior of the bicycle variable, which is negatively associated with proportions walking barefoot and proportions in agriculture, though the negative correlations are weaker than those between automobiles and indigenous culture traits or rurality.

Attendance at movies and radios per dwelling are measures of the main mass-media network. The correlation of these traits with 1960 urbanization was as strong (Table 9) as for automobiles. As Table 11 shows, these traits, along

Fig. 11.--The highway system.

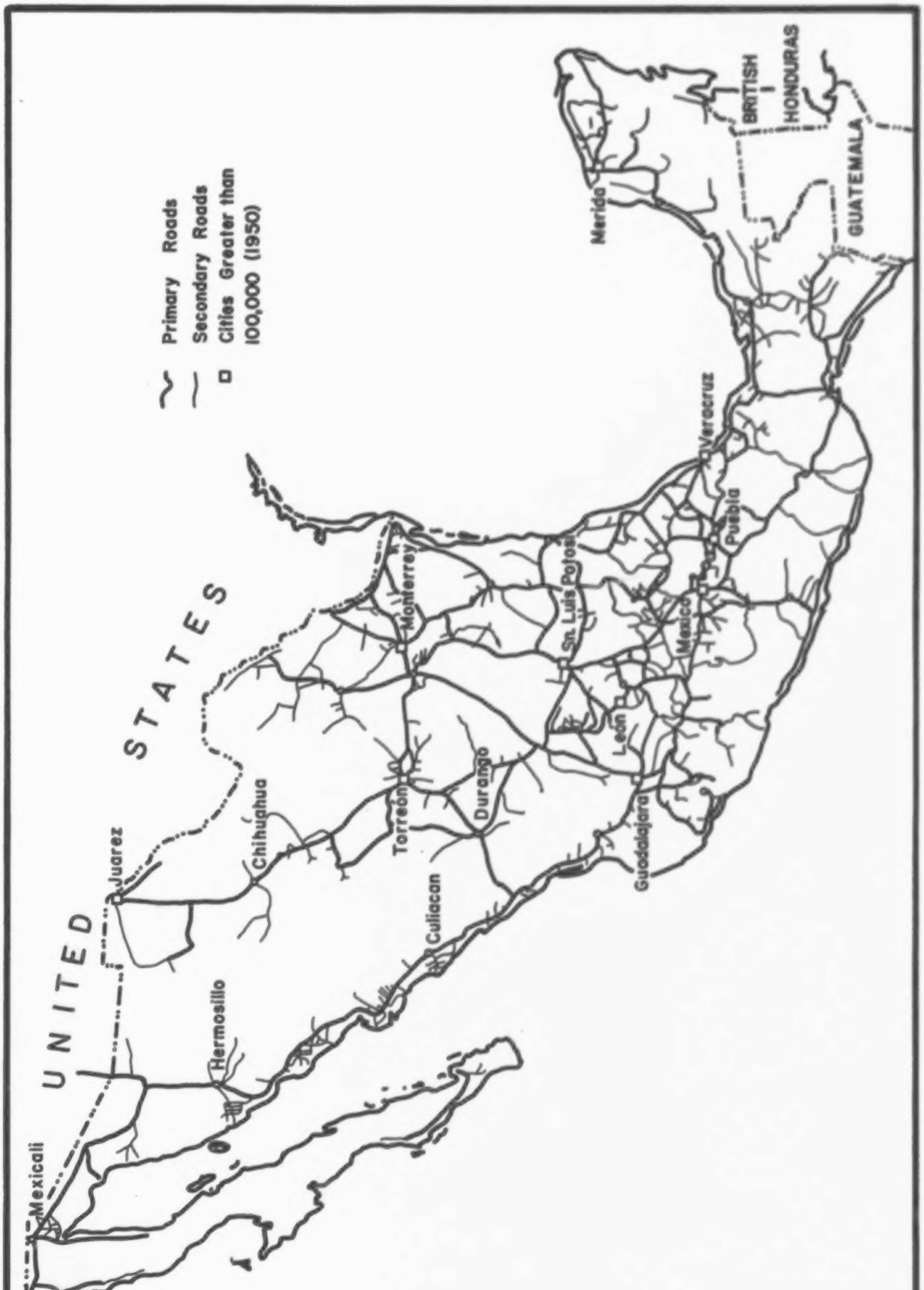

Primary Roads
Secondary Roads
□ Cities Greater than 100,000 (1950)
UNITED STATES
Mexicali
Hermosillo
Juarez
Chihuahua
Culiacan
Torreon
Durango
Monterrey
Sn. Luis Potosi
Leon
Guadalajara
Mexico
Puebla
Veracruz
Merida
BRITISH HONDURAS
GUATEMALA

TABLE 9

CORRELATIONS BETWEEN URBANIZATION VARIABLES AND VARIABLES RELATING TO TRANSPORTATION, COMMUNICATION, AND FACILITIES, 1960

	Density	Urban 2,500+	Pop. 50,000+	Urban	In-migrants
	1960	1960	1960	1960-1950/ 1960-1940	1960
Transportation					
Railroads/Pop	-.407	.418	.138	-.257	....
Railroads/Area	.799	.155	.066	-.654	....
Roads/Pop	-.826	.142	-.062	.647	....
Roads/Area	.841	-.016	-.144	-.051	....
Bicycles/Pop	-.091	.285	.075	-.037	....
Autos/Pop	-.311	.784	.699	.582	.642
Communication and facilities					
Movies/Pop	-.207	.785	.538	.091	.342
Radio	-.262	.847	.686	.218	.527
Electricity/Capita	-.220	.434	.470	.528	.436
Running Water	.053	.638	.560	.106	.187

TABLE 10

CORRELATIONS BETWEEN THE PROPORTIONS OF MALES WALKING BAREFOOT AND IN AGRICULTURE AND TRANSPORTATION VARIABLES

	Barefoot/Males		Agriculture/ EcAct Males	
	1940	1960	1940	1960
Railroads/Pop				
1940	-.290	-.306	-.034	-.134
1960	-.297	-.353	-.390	-.373
Railroads/Area				
1940	-.124	-.055	.010	-.097
1960	.042	.097	.146	-.041
Roads/Pop				
1940[b] (all-weather)	-.697	-.701	-.611	-.491
1960	-.182	-.232	-.478	-.304
Roads/Area				
1940[b] (all-weather)	-.065	-.028	-.058	-.146
1960	.226	.312	.174	.009
Roads paved 1960	-.446	-.398	-.326	-.422
Bicycles/Pop				
1940	-.293	-.414	-.496	-.539
1960	-.089	-.190	-.351	-.267
Autos/Pop				
1940	-.703	-.733	-.775	-.797
1960	-.597	-.626	-.789	-.887

TABLE 11

CORRELATIONS BETWEEN COMMUNICATION VARIABLES AND CHARACTERISTICS OF AGRICULTURE

	Movies/Pop.		Radio	Library Use	Movies/Pop.
	1940	1960	1960	1940	1960-1940
Ag/EcAct M 1940	-.755	-.639	-.843	-.434	-.007
Ag/EcAct M 1960	-.693	-.661	-.880	-.437	-.099
Ag/EcAct M 1960-1940	-.152	-.276	-.386	-.189	-.243
Ejidos/Ag Pop 1940	-.052	.070	-.078	.139	.018
Ag Labor/Ag M 1940	-.162	-.063	-.050	-.202	.052
Ag Labor/Ag M 1960	.107	.424	.533	.364	.438
Ag Prop/Ag M 1940	.137	.014	.130	-.101	-.024
Ag Prop/Ag M 1960	-.094	-.412	-.521	-.365	-.442
Ag Prop/Ag M 1960-1940	-.134	-.344	-.491	-.270	-.378
Equip/Land 1950	.013	.289	.512	....	....
Farm mechanized, 1950	.657	.640	.765	.362	.158
Ag Inc. over $500, 1960	.668	.598	.755	.251	.122
Returns Glick, 1950-1930	.651	.324	.446	-.232	-.140

with 1940 library use, display a moderately high negative relationship with proportions engaged in agriculture. Where there is evidence of commercial agriculture (higher farm incomes, mechanized farms, and the use of much farm equipment), there is more use of radios. The proportion of dwellings having radios in 1960 ranged from 9 to 48 per cent; again the states in the north had the highest proportions.

The process of linking isolated groups into national centers of change is accomplished through the diffusion and acceptance of new ideas and practices. A first step in the study of that diffusion has been the identification of components of modernization through a description of ecological inter-relationships. This entailed both the preliminary identification of trait clusters through components analysis and mapping of the spatial patterning of variables. Lead areas and geographic nodes of modernization can be seen clearly enough, and their relationship to transportation networks (which are in turn associated with topography) is evident. But this is by no means the whole story. Although there was stability in these geographic patterns, they also changed. There are correlations between the adoption of Western and the discarding of indigenous culture traits, but those relationships are by no means rigid. Neither are the geographic patterns simple. Why, for example, are the contrasts (cultural and economic) so sharp between adjacent areas in the center of the country, where development seems to be almost entirely an urban phenomenon, whereas the urban-rural contrasts are less in the north? How far has development and its geographic pattern been associated with, built upon, or stimulated the development of human resources? How far are educational differentials associated with contrasts in other cultural economic traits observed over relatively short distances in the high country? Many of these questions will still have to go unanswered at the end of the present study, but some of them at least should be illuminated. Hägerstrand's formulation of an interpersonal network of communication, with his constructs of "information fields" and "resistances" may help us here.

Education as a quality of the adult population increases the range of personal communication networks and participation in those information fields that carry the largest load of knowledge, attitudes, and ideas associated with modernization and change. Education also reduces resistances to those ideas, thereby encouraging adoption of new practices and orientation to life and jobs in modern sectors of the economy. The educational attainments of the adult populations of 1960 will, therefore, be studied in Chapter III, which examines tho relationships between adult qualifications, occupational traits, indicators of the economic and technological levels in agriculture and industry, and the acceptance of "urban cultural traits." Chapter IV will then explore the dynamics of change: the pace at which various parts of the country have moved along diverse dimensions, the extent and nature of shifts in the degree to which various traits are geographically associated, and the place of migration and of educational advance particularly in those changes. Focusing on people, this means an interpretation in the framework of an interpersonal system of communication and the relaying of new ideas and practices. Chapters V and VI will then take up the discussion of primary schooling as an "innovation," the diffusion of which is to be analyzed.

CHAPTER III

EDUCATIONAL ATTAINMENTS AND THE SOCIO-ECONOMIC STRUCTURE: THE SITUATION IN 1960

Mexican adults of 1960 who grew up in the 1920's and 1930's were part of an era in which national leaders emphasized education as a means to a better life for the population. Previously, despite verbal adherence to aims of compulsory and free education, schooling had been preparatory for elite roles. Although a law had been passed in 1911 inaugurating rural education, it was not until a decade later that serious rural education efforts were made. Cultural assimilation of Indians was fostered through a program of cultural missions into even remote sections of the country; efforts were made to inculcate literacy and to spread improved techniques of farming and homemaking.

From 1934 to 1940 there were more intensive literacy programs designed to close the gap between generations. Schools were to be used as community centers. Programs involving the Indians displayed some ambivalence between assimilating them into Mexican life and preserving idealized indigenous heritages. In recent years a uniform curriculum has prevailed, at least formally, in both rural and urban schools, though allowing for local adaptations.

Recently secondary education has been extended to larger proportions of the population, ostensibly to support roles in a modernizing industrial society. Preparatory schools established in the late nineteenth century had been based on the ideas of Comte and French positivism. These schools widened the gap between intelligentsia and working class or peasantry since the curriculum was designed to prepare for university or professional careers. In 1925, a three-year secondary cycle was introduced, followed by two years that were preparatory either for university or for vocational school. By 1960 pupils finishing a primary school had a choice: general secondary school, prevocational courses, university extension work, or secondary night school.

Given these efforts to extend education throughout the population and to adapt schools to new ideals and to a changing economy, to what extent had adults in 1960 become possessed of a practicable amount of schooling? In this chapter the distributions of literacy and of varying levels of completed schooling are compared among age and sex subpopulations and between urban and rural sectors. Labor-force participation rates, income levels, indexes of agricultural development, and measures of transportation and communication facilities are similarly portrayed. Each of these sets of variables in turn is related to literacy and to level of attained schooling for various subpopulations--again using states as units in the computation of correlations.

Literacy and School Attainments

Whether we look at literacy rates and school attainments of a population as factors in development or as reflections of it, certain characteristics of the distributions of these traits may be expected in association with various stages in the modernization of a nation and in the diffusion of development from one location or area to another. First of all, of course, is simply the question as to how widespread literacy has become, and where it has reached the critical mass that characterized initial modernization in the earlier history of Europe and Japan, or accompanies substantial progress in developing countries around the world today? But equally interesting and important is the degree to which urban progress has reached out into rural areas; how far have the hinterlands been integrated with the lead centers as participants in a common literate culture? Similarly, marked sex differentials in attainment of literacy (and then of full primary schooling or of schooling beyond that level) mark steps in the development process in most societies. The sex contrasts initially will be sharper where a traditional society puts severe constraints on women's activities (as in Moslem countries) than where the traditional society was less differentiated among sex lines. Despite many differences among nations in the mixtures of educational traits and other development phenomena, there can be no question as to the importance of these dimensions of educational diffusion and change. Later chapters will concentrate upon change and diffusion, but here the focus is on the situation in Mexico as of 1960 so far as education and literacy rates among the adult population are concerned.

How far had literacy diffused among adult men and women of various ages in the Mexico of 1960? Among the thirty-two states, the median rate for older (age 40+) males was 63 per cent; for females the corresponding rate was 53 per cent. The variations among states in these rates were extremely wide, however; the lowest figure for adult males was only 37 per cent, whereas the highest rates were close to 90 per cent. The ranges among females were from a fifth at the bottom (for older women) to four-fifths in the most advanced areas. These figures may be put in context by noting that historical research showed rates in western countries of at least 40 per cent among males before the beginnings of industrialization, and international comparisons across nations in the middle 1950's suggest that 40 per cent male literacy may be a minimum critical mass for emergence into the first stages of economic development and modernization.[1]

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[1] C. Arnold Anderson, "Literacy and Schooling on the Development Threshold: Some Historical Cases," in Education and Economic Development, edited by C. Arnold Anderson and Mary Jean Bowman (Chicago: Aldine Publishing Company, 1965), p. 347.

Male literacy rates in Mexico typically exceeded those of females in the older age groups by approximately 10 per cent, but the differences were declining, and among children, both urban and rural, they had almost disappeared. State-by-state comparisons showed larger sex differences in the more backward than in the more advanced states. Among the lowest third of states on male literacy (all under 60), the median male-female difference was almost exactly 20 percentage points, but in the third of states with the highest male rates (all over 70 per cent), the median excess of male literacy was less than ten points. These contrasts are substantial and are in the direction we should expect, but they are only part of the picture. Even more important are urban-rural contrasts within each sex and sex variabilities and differences within rural versus urban categories. These will now be discussed.

Looking first at males only, and the older among them, we find that as of 1960 the difference between the median urban and rural literacy rates was 19 per cent; for the top ranking state that difference was only 11 per cent, for the lowest state it was 22 per cent (Table 12). For the younger adult males urban-rural differences were smaller. Within each generation, the differences between median rural and urban rates were larger for women than for men. For both sexes, rural [illegible] of states lagged behind the urban to a greater degree in the less literate states. Generally, and especially among women, rural areas made more advance between generations than did urban.

Despite (or perhaps because of) the obvious cultural contrasts between Moslem countries of the Middle East and Latin America, it is interesting to compare these patterns with what Fattshipour found for Iran in 1956, where over-all adult literacy was, of course, very much lower than in Mexico. He found that urban females had higher literacy rates than rural males up to the age of 35 to 44 years, but at older ages rural males exceeded urban females in

TABLE 12

DISTRIBUTIONS OF LITERACY RATES BY AGE, SEX, AND RESIDENCE, 1960

	F.D.[a]	Lowest Value	25th Percentile	Median	75th Percentile	Highest Value[b]	Dispersion[c]
State							
Age 10+							
M+F	87	41	56	70	81	87	.36
Age 30+							
Males	90	40	56	67	76	86	.28
Females	76	24	40	59	73	81	.56
Age 40+							
Males	88	37	52	63	73	83	.33
Females	73	20	34	53	67	77	.62
Urban							
Males							
40-49	92	56	71	80	89	93	.23
25-29	94	41	74	83	92	95	.22
Females							
40-49	79	36	55	72	81	87	.36
25-29	85	36	65	79	87	92	.28
Rural							
Males							
40-49	76	34	49	61	72	82	.38
25-29	82	38	55	70	82	90	.39
Females							
40-49	49	16	26	46	64	79	.83
25-29	65	26	39	62	76	88	.60

[a] F.D. is Federal District.

[b] When the Federal District is the highest value, the value of the next ranking state is listed.

[c] (Percentile 75 minus Percentile 25)/median.

literacy.[1] In Mexico, the urban-rural took precedence over the sex differential among the older populations as well; in fact, in 1960, the median literacy rate for urban females age 40 and over was 72 per cent as against a 61 per cent rate for rural males of the same age. Although educationally-selective migration from rural to urban areas continuously depresses the rural rates, such migration would have to be exceedingly selective if it were not to depress urban rates as well; in other words, migration lowers both urban and rural rates, even though it has no effect on national rates. This is a truism whenever migrants from a backward area are better qualified than those they leave behind but nevertheless are not up to the general population in their destination areas. Such migrations have been important in Mexico in recent years, as they have been in some parts of the United States; they contribute to development, but they may also create problems at both origin and destination. On the other hand, exceptional high literacy among the older urban females constitutes presumptive evidence that these are urban areas that led in modernization but have been growing recently at a less rapid rate than some of the newer urban centers.

A priori it would be expected that proportions of the population without schooling would very nearly match proportions illiterate. These proportions are, of course, highly correlated, but the correlations are by no means perfect. Significant numbers can acquire literacy without schooling (whether on their own or by participation in a literacy campaign) in a country with so phonetic a language as Spanish. Nor does this preclude the fact that some who have attended school for a limited period, or participated in literacy campaigns, may nevertheless have remained illiterate or lapsed into illiteracy.

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[1] Fattahipour, op. cit., p. 84.

In 1940, the census reported that the proportions of male literates (over age 6) who had acquired their ability to read and write outside of formal schooling ranged among states from 29 to 74 per cent, with a median of 56 per cent; for females the corresponding figures were 32, 74, and 57 per cent. The important part played by out-of-school acquisition of literacy in pre-war decades is impressive. As development goes forward, the proportions who are literate but unschooled diminish. After 1940 the Mexican census did not publish data similar to those for 1940.

Literacy campaigns have been launched with much initial enthusiasm and have been described in a number of sources. Vasconceles sponsored the first campaign in 1921, which lasted only until 1922. In 1938, Cardenas initiated a literacy program that was part of a three-year plan; local literacy committees were in charge, although it was a federal project, and the states were asked to collaborate. Kneller describes this effort as achieving limited results due to lack of funds and weak support. After this attempt, the Federal government left the remnants of the program to the Literacy Office of the Cultural Missions Department and for stated educational institutions to promote. In 1944, a new literacy campaign was opened. Every literate Mexican was either to teach at least one illiterate person how to read and write or to pay for such instruction. "Literacy centers" with paid teachers were opened.[1] The proportion of illiterates in the population dropped from 58 per cent to 38 per cent between 1940 and 1960, but the absolute number of illiterates increased by 1,123,000 or 12 per cent.[2]

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[1] George F. Kneller, The Education of the Mexican Nation (New York: Columbia University Press, 1951), p. 19.

[2] Eduardo Ramon Ruiz, Mexico, The Challenge of Poverty and Illiteracy (San Marino: The Huntington Library, 1963).

3

Spanish is spoken by the majority of the population, but in the following states at least 5 per cent of the 1960 population spoke Indian languages only: Oaxaca 20, Chiapas 16, Quintana Roo 15, Yucatan 13, Hidalgo 12, Guerrero 10, Puebla 8, Campeche 6, and Veracruz 5. In 1960, 1,105,000 people or 3.8 per cent of the total Mexican population spoke Indian languages exclusively; 6.6 per cent spoke Indian and Spanish; and 89.1 per cent spoke Spanish exclusively. The proportions speaking Spanish only and that speaking Spanish plus an indigenous language were evenly divided between males and females. However, of the 3.8 per cent minority speaking indigenous languages only, 1.7 per cent were males and 2.1 per cent were females.

One aspect of the literacy program was the effort to link literacy to community-improvement projects. By 1959, it had become apparent that illiteracy was part of chronic economic and social backwardness and that mass literacy campaigns did not reach these problems. It was apparent also that the later literacy programs were of special benefit to urban dwellers; most of the literate persons obliged to teach others lived in urban and semi-urban centers. According to Ruiz, nothing was done in the villages.[1]

Literacy is a minimal index of educational attainments--especially when it is recognized that reported literacy may be illusory. Previous partial literacy may in fact be lost or never have been really "functional" and a few years of school may tell us no more. However, at school-completion levels of 7 years or more, the nature of the education index changes. At 10 years or over, we are looking at people who will be qualified for higher roles in the economy.

Distributions of schooling for the population over 30 years old are given in Table 13. As of 1960, the proportions of males who had gone beyond

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[1] Ibid.

TABLE 13

DISTRIBUTION OF LEVELS OF SCHOOLING OF THE ADULT POPULATION BY SEX, 1960

Years of Schooling	F.D.	Lowest Value[a]	25th Percentile	Median	75th Percentile	Highest Value[a]	Dispersion[b]
Males							
30+ years old							
No school	15.4	22.9	28.8	40.0	54.3	68.9	.625
1-6 years	61.1	29.6	43.1	57.0	64.2	67.0	.369
7+ years	23.5	1.4	2.3	3.8	6.8	10.5	1.158
10+ years	14.8	.8	1.2	1.9	3.2	5.6	1.010
13+ years	8.8	.4	.6	1.0	1.6	3.2	1.041
Females							
30+ years old							
No school	27.7	27.1	31.6	48.5	64.7	79.4	.673
1-6 years	56.6	19.9	34.2	51.5	62.4	88.4	.538
7+ years	15.7	.7	1.4	2.3	5.1	8.2	1.628
10+ years	7.2	.3	.5	.9	1.9	3.1	1.528
13+ years	2.5	.1	.1	.3	.5	.9	1.440

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[a] When the Federal District is the lowest value or the highest value, the value of the next ranking state is listed.

[b] (Percentile 75 minus Percentile 25)/median.

the completion of the 6-year elementary schools ranged among the states from 1.4 to 10.5 per cent, excluding the Federal District (23.5 per cent) Distributions of those with 10 years or more are similarly skewed and the medians drop to 1.9 per cent for males and 0.9 per cent for females. The lead of the Federal District and Nuevo Leon and the gap that separates them from the rest of the country is obvious. But it is significant and encouraging, nonetheless, that there are several lead centers or development nodes, not merely one.

Granted that Mexico is in a phase of development in which the lead centers stand out in dramatic contrast to the rest of the country when indicators that pick up the relatively higher and rarer levels of schooling are the focus of attention, questions still remain as to how functional either literacy or primary schooling may be in the aggregate, and how sharp a break in schooling beyond 6 years may entail with respect to the roles men (and women) play in the society. Though Mexican data relating an individual's literacy and schooling to his occupation or income are scarce, much can be learned about these questions by examining literacy rates and schooling among populations in various locations as these rates are associated with labor force participation and age at marriage, and with occupational structure and income distributions. The breakthrough among Indians and mestizos is indicated by diffusion of literacy among populations with cultural characteristics indicative of indigenous groups. Each variable or its inverse represents an aspect of a western-oriented definition of development.

Labor Force Participation, Deferred Marriage, Fertility Rates, and Education

One of the most interesting indicators of development may be the variabilities in proportions of the total male and female populations who are employed or are participants in the labor force. In the Mexican case, this is approximated by census data for the "economically active." The definition of "economically active" in the Mexican census is relatively easy to interpret in its application to men.[1] Proportion of total males economically active is primarily a demographic index reflecting the age composition of the population; the lower the rate, the larger the proportion who are children or too old to work (or, whatever their age, physically unable to work).

Proportions of the total male population who were economically active (first row of Table 14) varied remarkably little among the states; this uniformity undoubtedly reflects the predominance of Catholics among the urban populations and hence minimal effects of modernization differentials on differentials in birth rates between the Latin and indigenous populations. For these same reasons, the ratios are comparatively low: the median among the states was 26.7 per cent. The range from the twenty-fifth to the seventy-fifth percentile was only 2.1 percentage points and even the extreme cases range only from a low per cent of 24.5 to a high of 30.4 per cent. To get some perspective on this, it may be noted that the median ratio of employed to total population of both sexes in 1960 in the state of Kentucky, a ratio that includes the extreme low rates of the hard-core problem counties of East Kentucky, was 34 per cent. Most of the East Kentucky counties (and no others in the state) had ratios below 25, as low or below the lowest proportion "economically active" in Mexico; but the lowest Kentucky county matched the weighted male-plus-female ratio of "economically active" for the highest state of Mexico.

Female literacy and the activity of females outside the home are associated aspects of a cultural transformation that accompanies modernization in

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[1] Economically active population excludes those with no or antisocial occupations and domestic workers without pay and unpaid family workers. It includes the population from 8 to 11 and 12 years employed and unemployed who said they had a remunerated occupation on the day of the census whether or not they were exercising it on that day.

Mexico as elsewhere. As the females become literate, children are encouraged to attend school and to continue in school longer. At the same time, marriage and family customs may change. Women many postpone marriage, limit their families, or migrate in search of opportunities for work.

TABLE 14

DISTRIBUTIONS OF THE PROPORTIONS OF MALES AND FEMALES WHO WERE ECONOMICALLY ACTIVE, 1960

	F.D.	Lowest Value	25th Percentile	Median	75th Percentile	Highest Value[a]
All males	25.1	24.5	25.7	26.7	27.8	30.4
All females	10.9	3.3	4.4	4.9	5.6	6.4
Females age 12 and over	30.9	10.8	14.0	15.9	17.6	19.4

[a] When the Federal District is the highest value, the value of the next ranking state is listed.

Whereas it can be assumed that over 90 per cent of the able-bodied adult men will be economically active, the situation with respect to females is very different. Although reflecting the same demographic attributes of the general population as in the measures for males, in addition (and eclipsing those factors) female activity rates depend upon the ways and extent to which women have become participants in economic life outside the home. (The Mexican census included as "economically active" women the same definition as for males. Domestic workers who earn a salary are included.) The figures in row 2 of Table 14 can be compared directly with the male rates: the sex contrasts run roughly at 20 per cent at all points of the distribution. These differences are more easily interpreted looking at the rates for females aged 12 and over. As of 1960, the median was only 16 per cent and the difference between the twenty-fifth and seventy-fifth percentiles among the states was only 3.6 percentage points. The maximum value of 31 per cent, though still modest, stands out in striking contrast to the predominant pattern and is double the median rate. It is evident that the lives of women in a few developmental centers are quite unlike the lives of women over most of the nation. The pattern is not a simple one, however, as may be seen by looking at particular states. The states with the highest proportions of economically active females aged 12+ include some (not all) of the more advanced states of the North but also several states in the center. Of the states with the highest proportions of economically active females, the Federal District, Nuevo Leon, Morelos, Colima, Sonora, and Baja California Norte are among the eleven states with net in-migration rates. The states with the lowest ratios include Zacatecas, San Luis Potosi, and Durango in the north; Michoacan and Guanajuato in the center; and the Yucatan, Tabasco, Campeche, and Chiapas in the southeast and south.

Relationships of proportions of single women 20 to 24 years old, and of fertility to labor force participation, occupations, and education of females are summed up in Table 15. Generally the correlations run higher for proportions not married than for the fertility index. Much more interesting is the fact that the variables that show the strongest relationship to proportions of females who are unmarried are for traits that distinguish a small group of women who are advanced relative to the female population as a whole. Proportions economically active, female urban literacy rates, and density have the lowest correlations with postponement of marriage; proportions with 10 or more years of schooling and employment in white-collar and professional jobs have the highest correlations. Once again we are witnessing the emergence of a small leading minority at the forefront of societal transformation, but also, and this too is important,

TABLE 15

CORRELATIONS OF MARRIAGE AND FERTILITY RATES OF FEMALES, 1960, WITH VARIABLES RELATING TO EDUCATION, OCCUPATIONS, AND URBANIZATION

	Single F 20-24 Years	F under 5 Years/ All Females
Female literacy 25-29 years of age		
Urban	.222	.190
Rural	.398	.217
Adult female schooling 30+ years of age		
No schooling	-.399	-.135
7+ years of school	.484	-.095
10+ years of school	.503	-.184
Labor force participation		
Economically active females 12+ years of age	.228	-.057
Occupations of economically active females		
White collar	.568	-.147
Professional	.554	-.097
Urbanization		
Density	.199	-.372
Urban 2,500+	.416	-.242
Capital size	.404	-.418
Pop. 50,000+	.352	-.145

the fact that literacy even among females has indeed been spreading widely through the society.

Education and the Occupation Mix

Whether in the aggregate rising incomes have more effect on the spread of literacy and successively higher levels of educational attainment, or whether the direction of effect is opposite, is a much disputed matter. Probably the debate will never be resolved, since these are unquestionably mutually supportive processes that are manifested in a continuous sequence of overlapping interactions. At the other extreme, it is comparatively easy to isolate effects of schooling differentials on occupational and income differentials among the individuals who make up the national labor force at any given time, or, conversely, to identify the factors that differentiate families within a given area or community in the extent to which they encourage and invest in schooling of the rising generation. But this second, "micro" approach requires data that are or have been rarely available, and it by-passes important questions concerning scale or agglomeration effects that operate in indirect and more widely diffused ways that carry a whole populace and economy along, not merely differentiating roles and earnings among the members of the society. (Later, however, one micro-economic study of effects of schooling on income differentials in selected Mexican cities will be discussed.) Geographic comparison and the use of geographic units of observation partakes of some of the advantages and the limitations of each of these approaches. In particular, high serial correlations and high human migration combine to complicate analysis and interpretation of geographic differences in incomes and occupations as effects versus causes of observed educational attainments of the adult populations; high education today could reflect high incomes yesterday which are in turn correlated with high incomes today. On the other hand, analysis of geographic differentials enables us to take some of the communication and the complementarity effects of various factors into account, whereas these are normally lost to sight in analyses of individual education-occupation-earnings relationships. Bearing in mind the more serious qualifications, let us consider nevertheless what the cross-section geographic associations between educational characteristics of the Mexican population and occupational and other economic traits look like in 1960 and what they may suggest with respect to development patterns.

Table 16 provides some key indicators of the activities of the male and female populations by occupational and by industrial categories, as a background against which we may look at occupation-education relationships. States in which agriculture accounted for less than half of the male labor force are, of course, the exception: only 3 of the 31 states; agriculture accounted for two-thirds of the male labor force in half of the states, for three-fourths or more in six. Second in importance are "white collar" workers, but this category is defined very broadly (to permit comparisons with other years). It includes professional, clerical, sales and related workers, which means that along with the more modernized occupations there may be many traditional traders included under this heading. Even so, only one in eight Mexican men fell into this classification, though the range was from a low of under 6 per cent (in Oaxaca) to maximum figures of 26 per cent in Baja California Norte, and 42 per cent in the Federal District. Proportions among the economically active females are much higher, but it must be remembered that the base is small relative to the total adult female population. The median proportion of men in manufacturing employment was a tenth, with an interstate range from 4 to 35 per cent. But "manufacturing" is of many kinds, from traditional home crafts to technologically advanced enterprises, and moderately high (though not maximal) rates of employment in

TABLE 16

DISTRIBUTIONS OF THE ECONOMICALLY ACTIVE POPULATION WITHIN SEX AND OCCUPATION CATEGORIES, 1960

	F.D.	Lowest Value[a]	25 th Percentile	Median	75 th Percentile	Highest Value[a]	Dispersion[b]
Males							
Agriculture	3.1	35.5	54.7	67.7	74.9	86.1	.294
Professional	7.8	1.1	1.4	1.9	2.8	4.1	.778
Manufacturing	35.3	3.9	6.6	10.4	15.8	26.9	.885
Mining	.8	.4	.5	.8	2.1	5.4	1.912
White collar	42.0	5.6	9.5	12.8	18.1	26.4	.672
Clerical	16.0	1.3	2.1	3.5	6.0	9.4	1.126
Males + females							
Professional	8.0	1.5	2.3	2.8	3.9	5.1	.562
Clerical	16.6	1.6	2.5	4.2	6.9	10.4	1.067
Females							
Professional	8.6	3.3	5.8	8.4	9.5	13.8	.438
White collar	43.7	16.1	24.1	30.4	36.3	40.6	.401
Clerical	18.1	3.5	4.6	7.6	11.6	15.3	.918

[a] When the Federal District is the lowest value or the highest value, the value of the next ranking state is listed.

[b] (Percentile 75 minus Percentile 25)/median.

manufacturing can signal an area in which traditional crafts have special importance. However, even in the latter case a more than average degree of integration into modernizing sectors of economic life is likely, since large numbers employed even in traditional crafts means production for a wide market, commercialization of local life, and communication with the urban development nodes. A good index of the characteristics of manufactures is the proportion of employees who are women; at the median women accounted for roughly an eighth of the total, but the range in their share was from 8 to 35 per cent. The correlation of proportion of manufacturing employees who were female with literacy rates (omitted from the following table) are consistently negative with coefficients approximating -.40.

Table 17 lays out the correlation coefficients between various educational indexes and proportions of the labor force in various kinds of employment. The correlations with manufacturing employment are much lower than any of the others. The highest correlations in every case (except females in professional employment) are with proportions completing 7 or 10 years of schooling, rather than with the literacy or no-schooling proportions. Nevertheless, the literacy correlations are also high. Here is an identification problem in that all the schooling indexes are closely inter-correlated, and their effects on and responses to economic and occupational structure entail mutual interdependencies. The fact that the higher schooling attainment indicators seem to explain more of the variance even in proportions employed in agriculture does not mean that they would do so without some minimum critical literacy mass. On the other hand, it does support the inference, from cross-national comparisons, that once a critical threshold is passed, further literacy alone may have very little relationship to economic development until it becomes nearly universal; at that point it is in fact always associated with diffusion

TABLE 17

CORRELATIONS BETWEEN OCCUPATIONS AND VARIABLES RELATING TO LITERACY AND SCHOOLING, 1960

	Professions	Clerical	White Collar	Agriculture	Manufacturing
Literacy					
	Percentages of Economically Active Males				
Males + females 10+ years	.692	.823	.784	-.792	.418
Males 40+ years	.717	.836	.810	-.837	.486
	Percentages of Economically Active Females				
Females 40+ years	.759	.858	.831	....	....
Adult levels of schooling					
	Percentages of Economically Active Males				
Males 30+ years old					
No schooling	-.752	-.851	-.794	.810	-.448
7+ years of school	.848	.960	.941	-.909	.575
10+ years of school	.864	.937	.937	-.900	.561
	Percentages of Economically Active Females				
Females 30+ years old					
No schooling	-.756	-.877	-.835	....	....
7+ years of school	.628	.890	.884	....	....
10+ years of school	.639	.847	.863	....	....

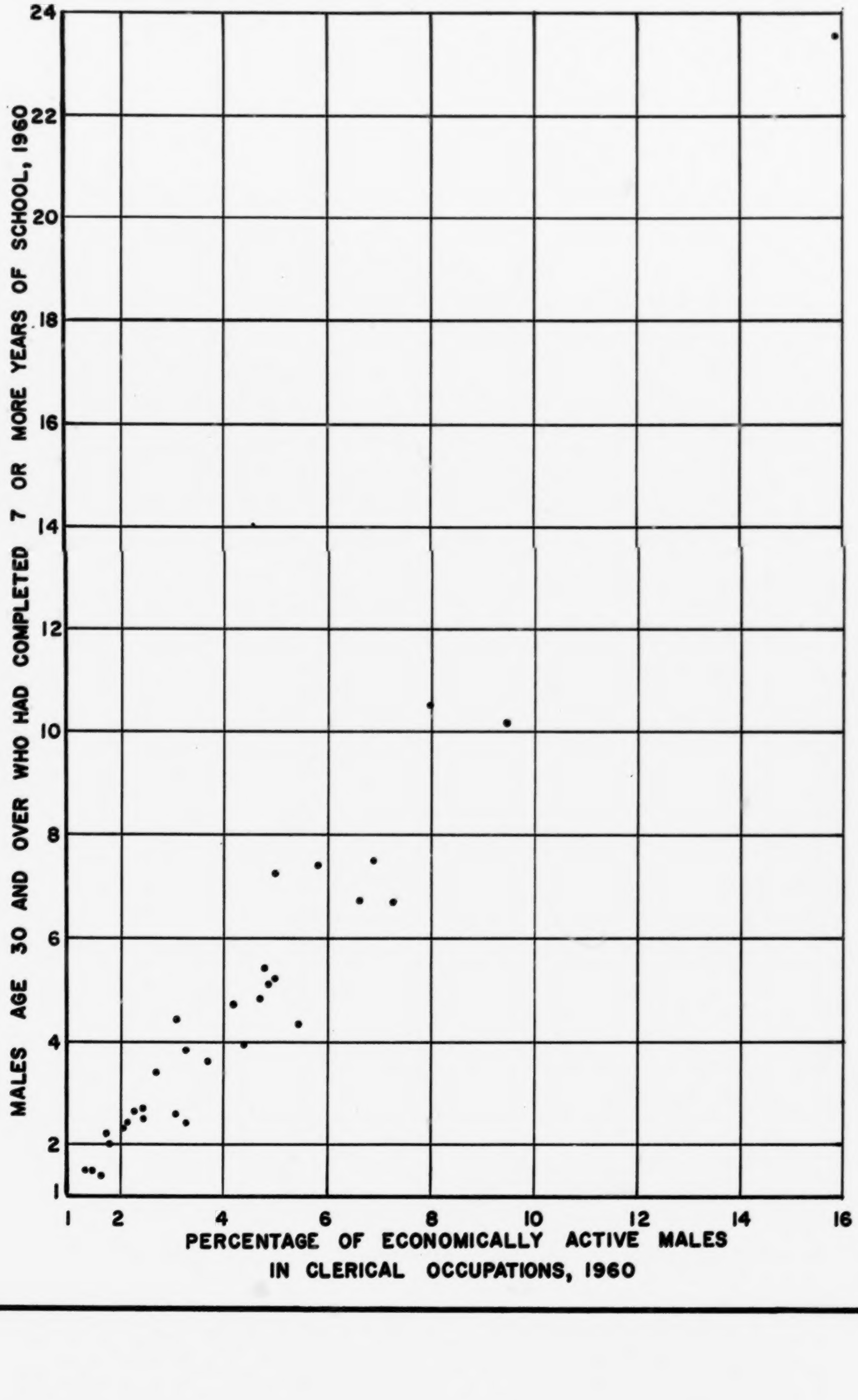
of secondary education among substantial minorities, at least, of the population. As a whole, Mexico is still at an in-between stage. It is of some interest to note that not only are the correlations of proportions of males in clerical employment with literacy high; they match very closely the correlations with proportions having seven or more years of schooling. Incidentally, on the average, the latter figure rises above the clerical percentages only in the upper fifth of the states on either measure (Figure 12).

Education and Income

Although occupational data may provide crude indicators of associations between the distribution of schooling in a population and income levels, they have serious limitations when used for that purpose. The usual aggregative type of measurement is some sort of estimate of per capita income; but such measures are not available by state. There are a number of relevant indices, however. Some are the more interesting in that they pick out distributional features of economic attainments (percentages at, or above or below stated levels), and these may be more interesting for analysis of development processes than mean values. There has also been a small sample study of individual income differentials associated with schooling in three Mexican cities that calls for brief comment before going on with the geographic analysis.

Martin Carnoy studied the costs and incremental income streams associated with successive levels of schooling in a cross-section sample of 3,901 male wage earners in the Federal District and in the cities of Monterrey and Puebla in 1962. Using regression analysis, he found that income increased with an increase in age and schooling and with wage and salary work in commerce, manufacturing, electricity, and transport rather than in construction or services; and with working in Mexico City rather than in Monterrey or Puebla. Going to

Fig. 12.--Scattergram of proportions of adult males 30+ years with 7+ years of schooling by proportions of economically active males in clerical occupations, 1960.


MALES AGE 30 AND OVER WHO HAD COMPLETED 7 OR MORE YEARS OF SCHOOL, 1960
24
22
20
18
16
14
12
10
8
6
4
2
1
1
2
4
6
8
10
12
14
16
PERCENTAGE OF ECONOMICALLY ACTIVE MALES
IN CLERICAL OCCUPATIONS, 1960

school while working had a negative effect on earnings. The highest internal rates of return to the investment in schooling were for completion of the last 2 years of primary school, completion of the first 2 years of secondary school, and the securing of a college degree. There was a high rate of return to the fifth and sixth years of primary school despite the inclusion of income forgone in the cost estimate of primary school.[1]

Five income or economic-level indicators are related to educational characteristics of the populations of the Mexican States in Table 18. The first two are proportions of wage earners in manufacturing and in agriculture who received incomes over 500 pesos per month in 1960. No matter what educational measure is used and regardless of sex (excepting the highest school attainment category for females) the correlations ran around .75. Taking employment of 8- to 11-year old children as a negative index of income or development, there are similar relationships with adult schooling: slightly higher prediction on the literacy and no-schooling indices, less predictive power on indices for schooling beyond 6 years. In contrast to most of the other economic and occupational indicators, employment of young boys identifies a minority at the lower instead of the upper part of the status structure. The correlations with pay per employee in larger manufacturing firms in 1955 are very low, reflecting the idiosyncratic character of those data in geographic units of the size and diversity of the Mexican states. Correlations of the schooling variables with the Glick development index are strikingly high.

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[1] Martin Carnoy, "The Return to Education in Mexico: A Case Study" (unpublished paper, The Brookings Institution, March, 1966).

TABLE 18

CORRELATIONS OF INDICES OF INCOME AND DEVELOPMENT WITH VARIABLES RELATING TO LITERACY AND SCHOOLING, 1960

	Income in Mfg. over 500 Pesos Monthly	Income in Ag. over 500 Pesos Monthly	Pay to Number Employed in Factory, 1955	Employment of 8-11 Year Old Males	Index of Development, 1950
Literacy					
Males + females 10+ years	.730	.768	.340	-.775	.754
Males 40+ years	.724	.745	.341	-.778	.815
Females 40+ years	.705	.794	.373	-.685	.775
Adult levels of schooling					
Males 30+ years old					
No schooling	-.765	-.757	-.346	.788	-.802
7+ years of school	.805	.774	.141	-.654	.922
10+ years of school	.778	.756	.117	-.631	.909
Females 30+ years old					
No schooling	-.734	-.785	-.369	.724	-.775
7+ years of school	.744	.702	.258	-.683	.931
10+ years of school	.678	.641	.232	-.662	.912

Literacy and the Agricultural Sector

In a rural setting we are looking for signs of transition from subsistence to commercial farming. Agricultural laborers represent the commercialization, while the persistence of small farms run by their owners without hired help are part of the subsistence pattern. In a study of literacy in nineteenth century Russia, Kahan describes the effects of achievement of literacy by rural males in the following way:

> The rise in the level of literacy among both the higher income groups of the present population and the agricultural laborers becomes the precondition for introduction of machinery and more modern farming methods. The decline of subsistence farming, a type of farming which had not offered visible incentives for education, made it easier to overcome the long-lasting inertia and maintenance of the status quo and to inject an additional impetus to mobility and change in the economy and society.[1]

In Mexico also, there should be evidence of at least a moderate relationship between the literacy of the rural population and the development of the rural sector.

In general there is a slightly higher association of literacy of 40- to 49-year old men than of literacy of men in their late twenties with characteristics of the agricultural labor forces and with equipment per acre of land (Table 19). However, this difference disappears in correlations of literacy with agricultural incomes and with farm mechanization, which also show generally higher relationships with literacy. Given the association of agricultural modernization with larger proportions of the agricultural labor force in wage jobs, it should not be surprising to note that higher agricultural wages go along with large proportions of hired workers and small proportions of proprietors.

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[1] Arcadius Kahan, "Determinants of the Incidence of Literacy in Rural Nineteenth-Century Russia," Education and Economic Development, ed. by C. Arnold Anderson and Mary Jean Bowman (Chicago: Aldine Publishing Co., 1965), p. 302.

TABLE 19

CORRELATIONS OF INDICES OF AGRICULTURAL DEVELOPMENT WITH RURAL LITERACY RATES

	Ag. Laborers/ M in Ag.	Proprietors/ M in Ag.	Income in Ag. over 500 Pesos Monthly	Equipment/ Land 1950	Farm Mechanization 1950
Males					
40-49 years	.251	-.229	.579	.389	.517
25-29 years	.146	-.127	.589	.290	.530
Females					
40-49 years	.360	-.355	.742	.474	.743
25-29 years	.319	-.316	.706	.446	.675
Income in Ag. over 500 pesos monthly	.471	-.479	....	.314	.790

It is interesting that in general literacy of rural females showed substantially higher correlations with characteristics of agriculture than did male rates. Given that the mechanization variables referred to 1950 and the female literacy figures to a decade later, however, the question remains whether female literacy had any real part in the earlier agricultural transformations. There are other grounds also for hypothesizing that the initiating influence came from the technological and production side, expanded female literacy being a result. Nevertheless, there is every reason for believing that the spread of literacy among rural women may prove in the end to be at least as profound a force working for change as the initial revolution in agricultural practices.

Mass Media Transportation, Cultural Traits, and Education

Four sets of data (demographic, communication, transportation, and education) all relate directly to communication, whether through movements of people, through mass media, or through education as a process and facilitator in the transmission of information. Hägerstrand's use of migration fields and of telephone conversations to index the spatial intensities of person-to-person "tellings" and thereby to delineate "information fields" was based on a conviction that interpersonal communication influences the acceptance of new ideas. State-unit data cannot adequately delineate such influence so indirect indicators of differential degrees of contact with "modern" ways must be used. These include mass media and transportation facilities, even though such indicators may be only loosely related to networks of person-to-person tellings.

Communication and transportation facilities are dispersed very unevenly through the country, as Table 20 shows. Even the proportions of the population owning radios, automobiles, and bicycles are small. Areas in which large proportions of adults were unschooled generally were ill served by mass media

TABLE 20

DISTRIBUTIONS OF TRANSPORTATION, COMMUNICATION, AND CULTURAL TRAITS, 1960

	F.D.	Lowest Value	25th Percentile	Median	75th Percentile	Highest Value[a]
Transportation						
Autos/1,000 pop.	39.5	1.5	3.7	6.4	18.9	75.2
Bicycles/1,000 pop.	14.2	3.0	5.9	13.5	21.7	52.0
Railroads/Km	204.1	0	8.0	14.2	28.8	68.0
Roads/Km	34.5	7.7	16.6	27.4	48.9	120.4
Roads paved/100 Km	100.0	15.2	44.5	61.6	75.5	91.1
Communication and facilities						
Radio	48.5	9.3	15.8	24.3	35.5	46.4
Movies/Pop.	16.1	0.9	1.9	4.6	8.6	13.6
Electricity/capita	55.2	1.6	7.0	18.0	53.9	84.0[b]
Running water	54.8	3.1	11.2	18.1	32.5	47.5
Culture						
Nonwheat bread/M+F	5.4	4.9	13.8	29.7	48.1	63.7
Barefoot/males	2.7	2.3	3.5	4.3	20.9	48.1

[a] When the Federal District is the highest value, the value of the next ranking state is listed.

[b] Exclusive of Baja California. In the source, data for northern and southern Baja California were combined and appear to be erroneous.

(Table 21). Radio and auto ownership displayed a strong relationship to local levels of schooling.

TABLE 21

CORRELATIONS OF MASS MEDIA AND TRANSPORTATION
WITH LITERACY AND SCHOOLING, 1960

	Movies	Radio	Autos	Bicycles
Persons age 40+				
Literacy				
Males	.617	.862	.803	....
Females	.711	.860	.787	....
Persons age 30+				
No schooling				
Males	-.564	-.853	-.812	-.149
Females	-.682	-.871	-.789	....
7+ years of school				
Males	.698	.861	.912	.168
Females	.722	.882	.904	....
10+ years of school				
Males	.718	.852	.899	.147
Females	.738	.860	.872	....

Communication over distance is partly related to the ease of travel. In rural areas there is no measure of the exchange of information and ideas at the market place and during the long walks to and from town. However, the increase and improvement of roads and the growth of bus service does suggest a flow of people over longer distances; how far this means effective face-to-face communication over greater distances in geographic and social space is not immediately clear, however. Rural folk may venture into the city for supplies yet rarely come in contact with new ways. They may go only to the outskirts and have dealings with people who live very much as they themselves.

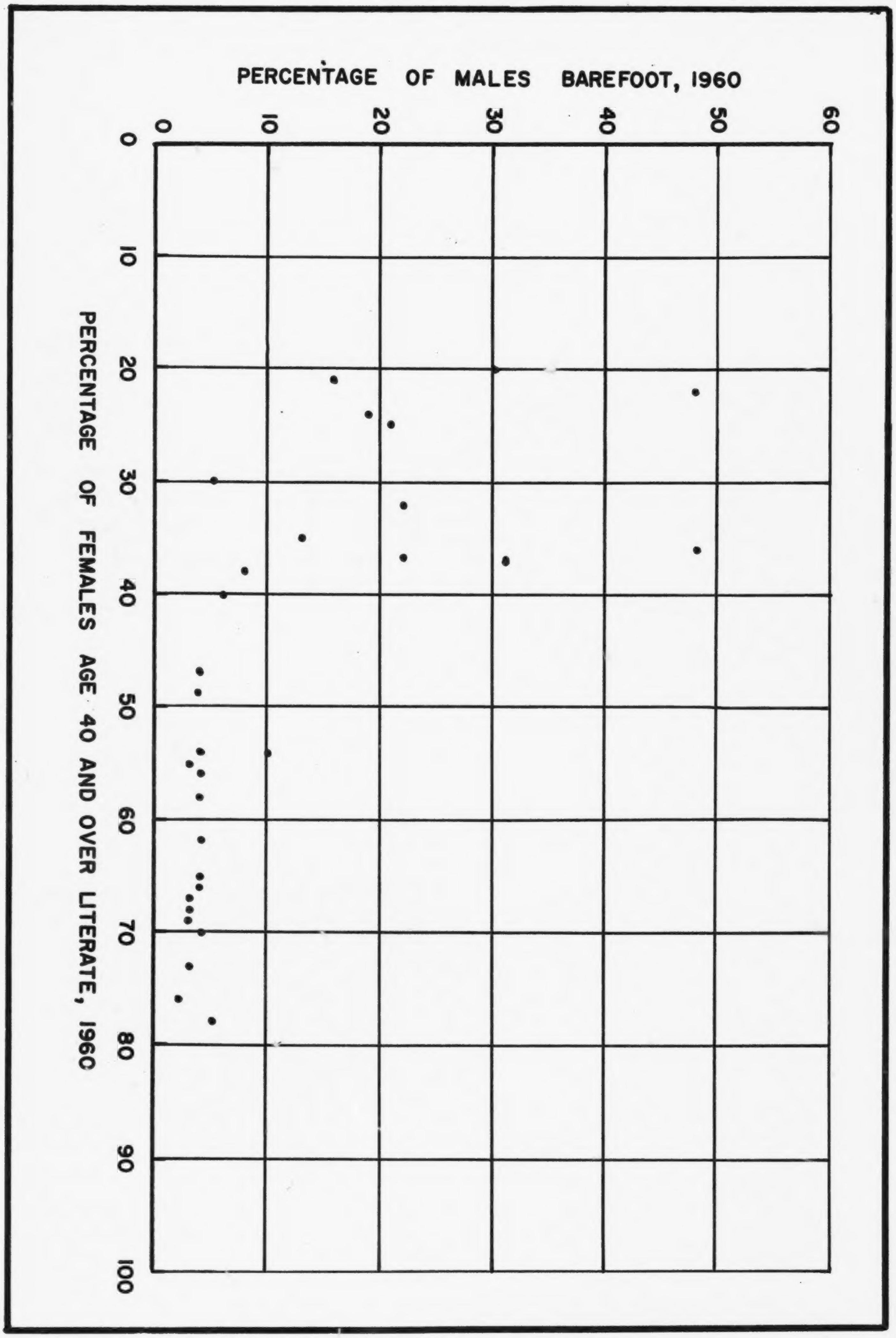
Change in cultural habits pertaining to food, dress, and housing is particularly important. Traditionally tortilla or corn-based food has been the staple crop of the Mexican countryside, while eating wheat bread (partially dependent on whether it is a local crop) indicates acceptance of "western customs." The census records also variations in footwear, from going barefoot to wearing huaraches (an open sandal) or shoes. Though partly a matter of climate and terrain, wearing shoes is also a sign of cultural change. The proportion of the population not eating wheat bread varies from 5 to 64 per cent with a median of 30. The range for males walking barefoot is from 2 to 48 per cent, with a median of 4 (Table 20). In Table 22 it can be seen that the proportion of males who are literate shows a negative relationship to the percentage who do not eat wheat bread and who do walk barefoot. Areas where high proportions of males walk barefoot are also those where older females are illiterate and where communication and transportation facilities are limited (Figure 13). Once females achieve over 40 per cent literacy, the proportion of males barefoot is negligible.

TABLE 22

CORRELATIONS OF CULTURAL CHARACTERISTICS WITH LITERACY, MOVIES, RADIO, AND BICYCYLES, 1960

	Non-wheat Bread/Pop. M+F	Walk Barefoot/ Males
Literacy		
10+ years M+F	-.568	-.707
40+ years males	-.588	-.677
40+ years females	-.560	-.792
Movies	-.605	-.595
Radio	-.623	-.719
Bicycles	-.087	-.190

Fig. 13.--Scattergram of percentages of males barefoot, 1960 and percentages of females age 40 and over literate, 1960.


PERCENTAGE OF MALES BAREFOOT, 1960
0
10
20
30
40
50
60
PERCENTAGE OF FEMALES AGE 40 AND OVER LITERATE, 1960
0
10
20
30
40
50
60
70
80
90
100

Summary

Table 23 summarizes the salient relationships among education, occupation, and communication traits in 1960.

The occupational distribution of the labor force is one indication of the extent of industrialization. In Mexico, in 1960, a median of 68 per cent of the economically active males were engaged in agriculture, 10 per cent in manufacturing, 13 per cent in white-collar occupations, 3 per cent in clerical, and 1.9 per cent in professional occupations.

In general, areas that were heavily agricultural showed negative associations with literacy and schooling. In those rural areas where high proportions of the population were literate, there was evidence of farm mechanization and of higher income in agriculture. Within the agricultural structure, agricultural laborers by 1960 had come to be associated with the modernizing elements.

The proportions of the population in white collar, professional, and clerical occupations were highly correlated with middle and high levels of formal schooling, as were proportions owning radios and automobiles.

TABLE 23

CORRELATION COEFFICIENTS FOR EDUCATION AND OTHER 1960 VARIABLES SHOWING THE HIGHEST ZERO-ORDER CORRELATIONS WITH LITERACY 10+, NO SCHOOLING, AND 7+ YEARS OF SCHOOLING[a]

	Literacy 10+ Years M+F	No Schooling		30+ Years of Age 7+ Years of Schooling	
		Males	Females	Males	Females
Literacy by age					
State					
10+ yrs. M+F	....	-.953	-.983	.806	.827
40+ yrs. males	.974	-.977	-.943	.836	.838
40+ yrs. females	.962	-.891	-.990	.813	.847
Urban					
10-14 yrs. males	....	....	-.816	....	....
40-49 yrs. females	.862	-.807	-.913	....	....
25-29 yrs. females	....	....	-.817	.826	.802
10-14 yrs. females	....	....	-.825	....	....
Rural					
40-49 yrs. males	.886	-.901	-.815	....	....
25-29 yrs. males	.891	-.880	-.822	....	....
10-14 yrs. males	.899	-.918	-.835	....	....
40-49 yrs. females	.943	-.869	-.952	....	....
25-29 yrs. females	.909	-.855	-.900	....	....
10-14 yrs. females	.891	-.903	-.846	....	....
Urban males minus females					
40-49 yrs.	....	....	.847	....	....
25-29 yrs.	....	....	.818	....	....

TABLE 23—Continued

	Literacy 10+ Years M+F	No Schooling		30+ Years of Age 7+ Years of Schooling	
		Males	Females	Males	Females
Adult levels of schooling 30+ years of age					
No schooling					
Males	-.953	....	.928	-.853	-.840
Females	-.983	.928	....	-.828	-.859
7+ yrs. of school					
Males	.806	-.853	-.828	....	.953
Females	.827	-.840	-.859	.953	....
10+ yrs. of school					
Males	....	-.819	-.803	.991	.935
Females	....	-.806	-.822	.934	.985
Occupation variables					
Ag. M/EcAct M	....	.810	.775	-.909	-.909
Collar/EcAct M	....	....	....	.941	.909
Collar/EcAct F	....	....	-.835	.812	.884
Clerk/EcAct M	.823	-.851	-.832	.960	.892
Clerk/EcAct F	.856	-.853	-.877	.911	.890
Prof/EcAct M	....	....	....	.848	.802
Other economic variables					
Mfg inc. over $500	....	....	....	.805	....
Develop. index 1950	....	-.802	....	.922	.931
Miscellaneous					
Radio	.866	-.853	-.871	.861	.882
Autos/Pop.	....	-.812	....	.912	.904
Urban	....	....	....	.802	.808

[a] Only correlations of ±.800 and over were included.

CHAPTER IV

STABILITY AND CHANGE OVER TIME: 1940 AND 1960 COMPARED

One of the most visible characteristics of the changes in Mexico has been the burgeoning of the areas that were in a privileged position even in 1930, while in general the poor lagged behind. The backward states have often been described as maintaining tight clusters of traits representing an unbroken structure of poverty. Did lagging states move ahead even though remaining in a low rank position? Did they move ahead enough to reduce either relative or absolute gaps or are the gaps between poor states widening? How far have the enormous efforts to bring literacy and schooling to larger segments of the population contributed to diffusion of the development process? Some kinds of variables pick out lead areas in modernization, others distinguish primarily areas that are following belatedly or not at all. Part of the process of change and adjustment is internal migration, which further complicates spatial patterns because migrants not only respond to opportunities but also carry attitudes and behavior traits with them and enlarge the geographic scope of informal communication networks. This chapter compares the populations of Mexican states in 1940 with those of 1960 to explore the patterns of change; the last section supplements that analysis with a mapping of the migrations that have taken place.

The evaluation of changes is from several perspectives with associated modes of measurement:

1. The comparison of medians and quartiles of selected variables in 1940 and 1960 gives a simple summary of changes in general levels and also of dispersions over time. In some cases, skewness, or the tendency of a distribution to have a few distinctively high values (positively skewed) or a few distinctively low values (negatively skewed) shifts for the same variable over time. This is an important aspect of the phasing of diffusion of traits through space.

2. It is asked how stable over time are the relative positions of the various states, and whether these stabilities are more evident in some respects than in others. Examination of these relationships leads in turn to 3, 4, and 5.

3. The question was raised as to whether intercorrelations among sets of traits were tighter or looser in 1960 than they were earlier? In general, a loosening up of geographic correlations might be expected if change brings initially distinctive sub-populations into closer contact and into participation in a common national system. However, certain traits may display tighter locational clustering with progress in more advanced stages of development. Since the function of education is of central concern, the question, for example, of whether the relationships between occupational structures and adult educational attainments were tighter or looser in 1960 than in 1940 is highly relevant. (Discussion of evidence concerning the closeness of relationships between school enrollment rates and other traits is deferred to Chapters V and VI.)

4. How have the rates of change in social and economic variables been affected by the starting position? The correlations between level of variables in 1940 and changes in the same variables between 1940 and 1960 were examined as one way of describing how far the disparities between states may have

narrowed or widened over time. It would be possible for those disparities to widen (or narrow) without shifts of rank and without changes in degree of correlations among variables.

5. To what extent were changes in one attribute associated with changes in another? For example, how did changes in the proportion of the population who were white-collar workers relate to changes in the proportions of males walking barefoot between 1940 and 1960?

Overview of Intertemporal Stability and Change

A summary inspection of changes from 1940 to 1960, both with respect to average values and for geographic stabilities in relative rankings on selected variables, is provided by Table 24. In a number of instances, correlation coefficients are valid even though direct comparisons between 1940 and 1960 means or medians would not be valid. This is the situation, for example, when the definition of a variable alters slightly but correlations between the two measures are extremely high. On the other hand, the change in definition of agricultural proprietors is more drastic. This can be adjusted by adding ejiditarios to proprietors in estimating 1940 means, but not in the intertemporal correlations.

In a developing country, we would expect to see, over a 20-year span, a decline in the proportion of males in agriculture, an increase in the proportions of the population in manufacturing and in white-collar occupations. There would also be upgrading of skills--evidenced in the literacy and schooling associations with occupations. In the decades between 1940 and 1960, one important feature of change was in fact the proportion of males in white-collar and manufacturing occupations, accompanied by their decline in agriculture. In 1940, the median proportion of economically active males in agriculture was

TABLE 24

MEDIAN 1940 AND 1960 VALUES AND INTERTEMPORAL CORRELATIONS; SELECTED VARIABLES

	Value in Median State		Correlation Coefficient
	1940	1960	
Population distribution			
Density	11.1	17.4	.974
Capital/urban	21.8	30.7	.943
Urban 2,500+	29.2	41.3	.923
In-migrant/resident (1940 and 1950)	7.3	7.3	.968
Culture			
Barefoot males	9.0	4.3	.917
Nonwheat bread (M+F)	60.0	29.7	.898
Economy			
Economically active males	28.0	26.7	.320
Economically active females 10+ 1940 and 12+ 1960	4.1	15.9	.651
Mfg/EcAct males	7.9	10.4	.785
Mfg F/M+F Mfg	8.4	12.9	.731
Pay/No. employed in factory 1940 and 1955	1.1	4.5	.555
Collar/EcAct males	4.2	12.7	.884
Collar/EcAct females	19.1	30.4	.771
Ag M/EcAct males	75.0	67.7	.902
Ag Labor/Ag males	48.8	50.6	.450
Ag Proprietors/Ag males	12.1	45.9	.063
Ejiditarios/Ag males 1940	41.7	....	....

TABLE 24--Continued

	Value in Median State		Correlation Coefficient
	1940	1960	
Transportation, communication, and facilities			
Roads/Pop[b]	.9	1.5	.462
Roads/Area	38.0	27.4	.674
Movies/Pop	2.9	4.6	.504
Bicycles/1,000 Pop	2.5	13.5	.774
Autos/1,000 Pop	2.1	6.4	.906
Electricity/capita	4.6	18.0	.782
Literacy years of age			
40+ males	48.2	63.0	.949
40+ females	37.8	52.8	.973
10-14 males	51.4	75.4	.935
10-14 females	53.6	75.9	.946
Education of adults (1950 and 1960)			
30+ yrs. of age			
No schooling males	37.3	40.0	.982
No schooling females	46.5	48.5	.865
7+ yrs. school males	4.2	3.8	.970
7+ yrs. school females	2.4	2.3	.976
10+ yrs. school males	2.0	1.9	.973
10+ yrs. school females	.9	.9	.931

75 per cent; over the ensuing decades this proportion dropped by almost 10 per cent. Nevertheless, two-thirds of the 1960 population was in farming. The percentage of males economically active remained the same in 1960 as in 1940; the median proportion of males in manufacturing rose slightly, from 8 per cent in 1940 to 10 per cent in 1960. The median proportion of urban residents rose considerably from 1940 (29 per cent) to 1960 (41 per cent). However, the median proportion of in-migrants remained stable. The percentage of males walking barefoot and eating non-wheat bread was dramatically lower in 1960 than 1940. Literacy of adults was on the average higher in 1960 than 1940, but in the median state the percentage of adults with middle and higher levels of schooling declined.

One way of assessing the geographic stability of relative position in development processes is to examine correlations between 1940 and 1960 values for the same variables (Table 24). This was done for all items that were comparable in both years (and for some that might seem comparable but actually are not). The consistent and extremely high correlations for items relating to population distribution, literacy or schooling, and cultural indicators stand out. Equally high are correlations between 1940 and 1960 incidence of automobiles and in proportions of men engaged in agriculture. Almost as high (.884) is the correlation over time in proportions of men in white-collar jobs.

At the other extreme, the near-zero correlation for the proportion of males in agriculture who are proprietors reflects the fact already noted that the 1940 and 1960 definitions are not comparable; this variable was included in the table to emphasize that fact. However, there was not a similar change in definition of the proportion of agricultural laborers. The modest coefficient on this variable (.450) reflects the major changes that were occurring in the geographic structure of Mexican agriculture. The low correlation between the two censuses in the proportions of economically-active males reflects primarily the extent and demographic selectivity of migrations.

Stabilities and Change in Correlation Matrices

The degree of geographic association among economic and social variables can shift substantially over time to a considerable extent quite independently of the inter-temporal correlations just examined. The exploration of stability or change in such relationships uncovers an important aspect of the diffusion of development, particularly of the sequential stages in it. Tables 25 and 26 sum up the 1940 and 1960 relationships among key sets of reasonably comparable variables. Certain similarities and contrasts stand out.

Correlations among the proportion of barefoot males, literacy of older adults, and post-primary schooling of younger adults all are comparatively high in both years, and they changed little during the 20 years. Zero-order correlations between urbanization and density were low in 1940 and remained low. On the other hand, there were some marked shifts in closeness of particular relationships.

The proportion of economically active females displayed consistently higher correlations with other traits in 1940 than in 1960. The only exception was the marked increase in the association (positive) with proportions of hired laborers in farming.

The relationship of proportion of manufacturing workers who were female with low productivity and low income has been mentioned earlier. Over the two decades, proportions of females employed in manufacturing became more closely associated with the less modern aspects of industrialization. For example, in 1940, the correlation between the female share in manufacturing and the proportion of males in white-collar jobs was only -.188 but in 1960 it was -.420;

TABLE 25

SELECTED 1940 ZERO-ORDER CORRELATIONS

				Schooling Age 25+ 7+ Years		Ag.		Collar	Mfg.
		M	F	M	F	M	M	M	M
	Variable Number	145	146	236	237	79	83	64	96
Literacy									
145	Lit. 40+ M	....							
146	Lit. 40+ F	.917	....						
Schooling; adults age 25+ (1950)									
236	7+ yrs. school M	.876	.880	....					
237	7+ yrs. school F	.818	.881	.938	....				
Labor force participation and economy									
79	Ag/EcAct M	-.839	-.860	-.854	-.878	....			
83	Ag Labor/Ag M	-.162	-.097	-.163	-.147	.143	....		
64	Collar/EcAct M	.890	.876	.915	.843	-.888	-.184	....	
96	Mfg/EcAct M	.522	.494	.559	.574	-.752	-.089	.493	....
106	Pay/Emp in Fact	.208	.322	.244	.382	-.322	.250	.218	.072
58	EcAct F 10+	.420	.505	.496	.477	-.519	.174	.500	.562
67	Collar/EcAct F	.826	.836	.832	.812	-.735	-.236	.800	.275
100	Mfg F/M+F Mfg	-.435	-.199	-.240	-.213	.224	.146	-.188	-.184
Cultural traits									
117	Nonwheat M+F	-.669	-.691	-.719	-.631	.602	.271	-.709	-.396
125	Barefoot M	-.626	-.796	-.588	-.717	.666	-.124	-.540	-.431
Transportation, communication, and facilities									
32	Autos/pop	.737	.786	.819	.877	-.775	-.098	.724	.505
39	Movies/pop	.783	.764	.826	.710	-.755	-.162	.862	.448
36	Elect/capita	.305	.395	.385	.537	-.434	-.038	.248	.434
Population distribution									
1	Density	-.505	-.604	-.565	-.447	.436	.209	-.624	.068
4	Urban 2,500+	.776	.777	.774	.799	-.903	-.207	.763	.821

TABLE 25--Continued

Pay/ Emp	EcAct 10+	Collar	Mfg F/ M+F	Non-wheat	Bareft.	Autos	Movies	Elect/ Capita	Density	Urban 2,500+
	F	F		M+F	M					
106	58	67	100	117	125	32	39	36	1	4
....										
.131	....									
.342	.198	....								
.071	.273	-.332	....							
-.017	-.549	-.579	-.065	....						
-.498	-.371	-.641	.077	.361	....					
.484	.435	.762	-.311	-.517	-.703	....				
.209	.368	.694	-.055	-.666	-.513	.580	....			
.288	.488	.319	-.186	-.294	-.415	.682	.044	....		
-.140	-.016	-.726	-.049	.388	.318	-.351	-.662	.121	....	
.124	.463	.586	-.242	-.665	-.634	.679	.715	.412	-.250	....

TABLE 26

SELECTED 1960 ZERO-ORDER CORRELATIONS

		Literacy Age 40+		Schooling Age 30+ 7+ Years		Ag.	Ag. Labor	Collar	Mfg.
		M	F	M	F	M	M	M	M
	Variable Number	147	148	238	239	80	84	65	97
Literacy and schooling									
147	Lit. 40+ M	....							
148	Lit. 40+ F	.923	....						
Adults age 30+									
238	7+ yrs. school M	.836	.813	....					
239	7+ yrs. school F	.838	.847	.953	....				
Labor force participation and economy									
80	Ag/EcAct M	-.837	-.760	-.909	-.909	....			
84	Ag Labor/Ag M	.315	.342	.397	.464	.479	....		
65	Collar/EcAct M	.810	.777	.941	.909	.953	.440	....	
97	Mfg/EcAct M	.486	.358	.575	.652	.785	.350	.696	....
108	Pay/Emp in Fact	.344	.373	.141	.258	.144	.244	.154	.012
59	EcAct F 12+	.127	.109	.391	.326	.343	.524	.288	.237
68	Collar/EcAct F	.762	.831	.812	.884	.807	.510	.851	.592
101	Mfg F/M+F in Mfg	-.564	-.425	-.347	-.371	-.477	-.176	-.420	-.343
Cultural traits									
119	Nonwheat M+F	-.588	-.560	-.750	-.586	-.595	-.154	-.695	-.198
127	Barefoot M	-.677	-.792	-.631	-.702	-.606	-.359	-.665	-.364
Transportation, communication, and facilities									
33	Autos/pop	.803	.787	.912	.904	.887	.579	.894	.601
40	Movies/pop	.617	.711	.698	.722	.661	.424	.743	.436
37	Elect/capita	.585	.577	.609	.672	.609	.674	.543	.374
Population distribution									
2	Density	-.463	-.538	-.431	-.336	-.184	.191	-.269	.223
6	Urban 2,500+	.777	.742	.802	.808	.873	.392	.860	.713

TABLE 26—Continued

Pay/ Emp	EcAct 10+	Collar	Mfg F/ M+F	Non-wheat	Bareft.	Autos	Movies	Elect/ Capita	Density	Urban 2,500+
	F	F		M+F	M					
108	59	68	101	119	127	33	40	37	2	6
....										
-.078	....									
.391	.166	....								
-.295	.151	-.390	....							
.035	-.342	-.526	.136	....						
-.482	-.053	-.736	.341	.329	....					
.262	.382	.848	-.403	-.637	-.626	....				
.217	.079	.834	-.245	-.605	-.595	.706	....			
.449	.350	.581	-.278	-.343	-.451	.769	.498	....		
-.123	.058	-.191	.176	.478	.328	-.311	-.207	-.220	....	
.152	.210	.820	-.337	-.606	-.653	.784	.785	.434	-.093	....

the correlation with proportion of males engaged in manufacturing was -.184 in 1940 and -.343 in 1960; and correlations with proportions of people living in urban areas rose from -.242 to -.337. While the proportion of males in manufacturing rose from 1940 to 1960, the correlation of that ratio with urbanization became somewhat looser: .821 and .713. On the other hand, the proportions of males in white-collar and in manufacturing jobs were more closely correlated in the later year (.493 in 1940 and .696 in 1960). The former ratio also became more closely correlated with residence in urban areas.

In 1940, the proportions engaged in non-farm occupations were more closely associated with literacy than with proportions of people who had more than a primary education; by 1960, however, that relationship was reversed. In fact, auto ownership, use of electricity, proportions working in white-collar occupations, and the population possessing middle levels of schooling showed stronger relationships among themselves and to urbanization in 1960. These shifts in degree of correlation are not random.

Change alters the shapes of the distribution of social or cultural traits, and there is as a result a change in the meaning of the variable--even if the definition remains unchanged and reporting is accurate. Literacy is one example. The diffusion of literacy follows an historical pattern as a lead variable--until it reaches a saturation point in the more advanced localities. In earlier stages, literacy may show high correlations with occupations and with other indexes of development. As larger proportions of the population become literate, the intercorrelations between literacy and development may decline, while adult proportions possessing post-primary schooling become large enough to give reliable observations and to take their place as a significant lead variable in the later years. Areas with high levels of literacy in earlier years lead in the diffusion of higher-level occupations one generation later.

Literacy, white-collar workers, and rising levels of adult schooling were the key variables in this process.

A variable that is complex may change in meaning over time also; an important example is proportion of white-collar workers. This category may be composed mainly of sellers in 1940 but have many more clerical workers in 1960, and selling itself may change in character. Without change in content of the category, the quality of performance may rise appreciably, in part as a reflection of supplies of human resources. Where there are more high-quality workers, there can be more selectivity by employers. This might be manifested in the following way. Literacy led the development sequence and by 1960 was becoming nearly universal except in the most laggard states. Meanwhile, schooling beyond 6 years was spreading in the progressive centers. By 1960, the white-collar categories included more genuinely clerical workers, and correlations between proportions working as clerks and proportions with more than primary schooling had risen; it was now possible for employers to select them out instead of trying to get along with unqualified help.

Changes in Agriculture and Its Correlates

The relationships among agricultural variables and between them and other variables are distinctive and call for special comment. On a national level the proportion of males in agriculture diminished from 70 per cent in 1940 to 59 per cent in 1960, but in spite of that decrease the dispersion among the states in the proportions in agriculture remained about the same. There were some marked shifts of position. Mexico and Morelos were two states with high 1940 proportions in agriculture that shifted rank between 1940 and 1960 from 28 and 27 respectively to 15 and 14. Jalisco, a state with moderately low relative proportions in agriculture in 1940, dropped further from rank 13 in 1940 to 8 in 1960. (The lower numbers of rank indicate smaller proportions of economically active males in agriculture.)

In general the changes of the proportion of males in agriculture reflict urbanization. The items that are more negatively related to agricultural areas in 1960 than in 1940 are the rise in the use of electricity, the presence of a greater population with middle and high levels of schooling, the proportions of males in white-collar occupations, and the ownership of autos. These stronger negative associations in 1960 with males in agriculture are accompanied by a decline in the positive associations between population density and proportions in agriculture from .436 in 1940 to .184 in 1960. Both urbanization processes and important changes in the structure of agriculture are involved in these changed associations.

Where relationships with proportions in agriculture show a stronger negative association in 1940 than in 1960, there is the implication that either the characteristic measured had spread more fully into rural areas by 1960, or rural-urban migrants had brought rural traits into the city without yet showing much effect of their urban residence. These are almost opposite kinds of processes. The characteristics showing the highest 1940 relative to 1960 negative associations with males in agriculture were the literacy of females 40+, the mean pay in factories, the proportion of economically active females, and the attendance at movies (Tables 25 and 26).

In 1940, the presence of agricultural laborers was only slightly associated with other characteristics: positive with ratio of equipment to land, with adults lacking schooling, and with age-grade retardation of rural boys in school. The spatial selectivity of Mexico's agricultural transformations is reflected in the fact that the relationships between proportions of farm laborers and features of the milieu were much stronger in 1960 but dramatically reversed from 1940. In 1940, there had been low but negative correlations between proportions of laborers among men employed in agriculture and indicators of economic or educational progress. In 1960, there is instead, a low but definitely positive association with middle and high levels of schooling, with economically active females, with degree of farm mechanization, and with proportions of farm wage workers receiving more than 500 pesos a month. There was also a positive association with movie attendance and with ownership of radios and autos. These changes are linked with adjacent urban developments and modernization; thus correlations with both in-migration and proportions urban were positive at roughtly .400 in 1960 whereas they had been a negative -.200 in 1940.

Extent of Change in Relation to the Starting Point

The processes of change and the diffusion of change may be better understood, as has been mentioned, if we think of waves in development sequences. Lead areas pull away from the rest on characteristics that represent new departures for the particular stage. Gradually some of the other areas imitate or move toward the new norms while yet others lag behind, catching up belatedly if at all. Meanwhile new changes are sending new waves through the society. These processes will be reflected in predictable relationships between starting positions and ensuing changes. They are well illustrated by the data of Table 27.

Out in front are the unambiguous lead indicators: notably proportions of males holding white-collar jobs, followed by automobile density and electricity use. These are traits that gained the largest amount absolutely where they were already highest in 1940, and in states that were already relatively urbanized at that time and displayed the greatest pace of urbanization from 1930 to 1960. Larger increases in proportions of males in white-collar jobs and in automobiles were associated also with greater proportions of females

TABLE 27

CORRELATIONS OF VARIABLES MEASURING CHANGE WITH SELECTED 1940 VARIABLES AND WITH 1960 SEX DIFFERENCES IN LITERACY

		Change Variables				
		EcAct	Ag.	Collar		Non-wheat
		F	M	M	F	1940-60
		1960-40	1960-40	1960-40	1960-40	
	1940 Variables	60	81	66	69	122
Labor force participation						
58	EcAct F 10+	-.089	-.273	.507	.310	-.219
79	Ag/EcAct M	.224	.105	-.643	.192	.351
64	Collar/EcAct M	-.181	-.163	.552	-.403	-.219
67	Collar/EcAct F	-.111	-.176	.525	-.598	-.218
Cultural traits						
117	Nonwheat M+F	.119	.298	-.607	.095	.557
125	Barefoot M	.309	.081	-.549	.031	.383
Transportation, communication, and facilities						
32	Autos/pop	.050	-.331	.734	-.133	-.357
39	Movies/pop	-.106	-.152	.470	-.427	-.245
36	Elect/capita	.163	-.250	.510	.227	-.362
4	Urban 2,500+	-.305	-.184	.683	-.002	-.558
Literacy by age						
140	Lit. 10+ M+F	-.162	-.197	.584	-.422	-.329
157	Lit. 10-14 M	-.232	-.172	.566	-.398	-.305
158	Lit. 10-14 F	-.079	-.271	.594	-.449	-.325
Sex differences in literacy 1960						
208	Lit. 40-49 MU-F	.413	-.070	-.420	.231	.318
218	Lit. 40-49 MR-F	.317	-.100	-.339	.191	.173

TABLE 27—Continued

Change Variables						
Barefoot	Autos/Pop	Movies	Elect/Capita	Urban		Median
1940-60	1960-40	1960-40	1960-40	1960-50/1960-40	1960/30	1960-40
135	35	41	38	14	13	
-.395	.457	.148	.178	.186	.204	3.3
.584	-.506	-.007	-.544	-.357	-.196	-60.7
-.381	.493	-.120	.380	.309	.464	8.5
-.501	.409	.124	.478	.255	.510	10.3
.240	-.455	-.202	-.257	-.082	-.393	21.9
.937	-.143	-.258	-.467	-.059	-.302	3.6
-.628	-.331	.309	.618	.138	.495	.4
-.317	.333	-.286	.207	.036	.495	1.8
-.515	.321	.553	.477	.309	.090	10.8
-.535	.437	.086	.424	.173	.191	
-.550	.451	.034	.457	.263	.484	
-.566	.482	.088	.294	.314	.364	
-.398	.457	.013	.429	.193	.505	
.798	-.352	-.224	-.351	-.380	-.151	
.816	-.268	-.237	-.299	-.319	-.183	

economically active in 1940, and with smaller urban-rural differences in literacy among older women at that time.

The negative correlations between changes in female white-collar proportions and the proportions white collar for both males and females in 1940 (matched also by negative correlations with 1940 literacy and movie attendance) reverse the signs observed in relationships for male white-collar changes. This seems puzzling at first sight; females in white-collar employment might be expected to be even more a lead variable than males. However, it is important to remember three things. First, the nature of white-collar jobs differ by sex. Even if the definitions of "white collar" for 1940 and 1960 were identical, the change mix within this rubric may be very different for the two sexes. Second, there are some unavoidable discrepancies between 1940 and 1960 definitions that probably add more 1960 rural females than males to the count as compared with 1940. Third, and more important, data relating to proportions in white-collar work take the number economically active as the base. The proportions of males economically active may vary little in either time or space, but among females variance on this measure is high, and the national proportions of females economically active rose dramatically, to a degree that cannot possibly be accounted for by incomparabilities in the statistical measures. There is a multiplicity of factors at play here that cannot be sorted out without a special analysis of the components of female white-collar employment and of statistical analysis of determinants of the observed ratios and changes in them. This will be discussed again in an examination of change variables in the components analysis. So far as the zero-order correlations of Table 27 are concerned, the one unambiguous value is the correlation between increase in female white-collar proportions and the 1940 proportions of females economically active; though the coefficient is only .310, it carries the positive sign that would be expected if female white-collar ratios constitute lead indicators. The zero-order correlation between male and female changes in white-collar proportions is also positive, but it is even lower, at .258 (Table 28). Turning back to Table 26, it may be seen also that proportions of women in white-collar jobs in 1960 show correlations with indicators of advance that are substantial and that carry the expected signs. These are firmer indicators than the highly complex change measure for white-collar females, a measure that picks up too many unidentified elements and carries a large random component even when it is run against the 1940 proportions of females economically active.

Turning once more to Table 27, attention can be given to the lag patterns. Now modernization is measured by reduction in the incidence of a traditional or lag trait. The operation of this kind of change appears clearly in the variables relating to indigenous culture. In fact, the highest correlation coefficient is between proportions of males barefoot in 1940 and the decline in that percentage between 1940 and 1960: r = .937. The analogous correlation for proportions not eating wheat bread is .557. Both of these culture-change variables tended to be somewhat higher in states with low 1940 proportions of males in agriculture and low 1940 literacy rates. Particularly striking is the high positive correlation between change in proportion of males barefoot and even 1960 sex differences in literacy rates of older people (40-49) within both urban and rural sectors. Less dramatic, but part of the same syndrome, the strongest correlation with increase from 1940 to 1960 in proportions of females economically active is also with sex differences in 1940 adult literacy. The other changes reported in Table 27 were relatively independent of any of the starting traits or of other measured changes.

Table 28 summarizes correlations among the change variables themselves. The signs in all cases are those that would be inferred from the relationships

TABLE 28

INTERCORRELATIONS OF CHANGE VARIABLES AMONG THEMSELVES

		Literacy (40-49)-(60+)				No Schooling	EcAct	Collar	
		M		F		M	F	M	F
		Urban	Rural	Urban	Rural	1950-1960	1960-1940		
	Variable Number	199	202	201	205	258	60	66	69
	Intergenerational changes in literacy								
199	(40-49)-(60+) M Urban	....							
202	(40-49)-(60+) M Rural	.308	....						
201	(40-49)-(60+) F Urban	.327	.609	....					
205	(40-49)-(60+) F Rural	.212	.753	.467	....				
258	Adults 30+ M, no schooling 1950-1960	.117	-.252	-.310	-.357	....			
	Changes in occupations and economy, 1960-1940								
60	EcAct F	-.285	-.403	-.455	-.287	.208	....		
66	Collar/EcAct M	-.137	.323	.217	.354	-.288	-.055	....	
69	Collar/EcAct F	-.028	-.269	-.329	-.283	.320	-.033	.258	....
81	Ag/EcAct M	.111	.135	.109	.131	-.031	-.340	.653	-.210
98	Mfg/EcAct M	-.034	.130	.146	.094	-.083	.297	.492	.174
94	Returns Glick (1950-1930)	-.147	.271	.338	.429	-.430	.046	.153	-.496
	Changes in cultural traits, 1940-1960								
122	Nonwheat M+F	.140	-.342	.067	-.236	.350	.348	-.448	-.224
135	Barefoot M	.001	-.327	-.368	-.535	.384	.306	-.510	-.146
138	Barefoot F	-.075	-.527	-.502	-.663	.399	.434	-.512	.012
	Changes in communication, transportation and facilities, 1960-1940								
41	Movies/pop	-.039	-.099	-.086	-.146	-.144	-.037	.426	.356
31	Bikes/pop	.112	.140	.206	.391	-.104	-.360	-.034	-.023
35	Autos/pop	-.110	-.024	.042	.254	-.031	.135	.530	.018
38	Elect/capita	.016	.273	.216	.401	-.138	.191	.576	.038
	Changes in urbanization								
14	Urban 1960-50/1960-40	-.047	.028	.180	.189	-.253	-.107	-.202	-.320
13	Urban 1960/1930	-.206	.051	.112	.064	-.476	.228	.377	-.329

TABLE 28--Continued

Ag.	Mfg.	Ret. Glick		Barefoot		Movies	Bikes	Autos	Elect	Urbanization	
M		1950-1930	M+F	M	F	1960-1940				1960-50/ 1960-40	1960/30
1960-1940											
81	98	94	122	135	138	41	31	35	38	14	13
....											
-.551	....										
-.089	.025	....									
.109	-.080	.146	....								
-.012	-.169	-.213	.331	....							
-.086	-.088	-.343	.371	.922	....						
-.243	.093	-.140	-.256	-.354	-.239	....					
.224	.075	.025	-.077	-.036	-.072	-.562	....				
-.389	.255	.059	.064	-.167	-.194	.088	.151	....			
-.380	.405	.129	-.121	-.444	-.375	.396	-.207	.437	....		
.423	-.250	-.078	.130	-.103	-.173	-.019	.002	.315	.202	....	
-.552	.182	.658	-.016	-.074	-.074	.090	-.171	.067	.160	-.281	....

already examined, but it might have been more difficult to predict the magnitude of the correlations. Changes in proportions of males and females going barefoot are most closely correlated (.922), but no other coefficients are as high as .700. There are, of course, definite associations among changes in the various literacy variables and among those relating to male occupations. There are clear connections also between changes in proportions of white-collar males and changes in movie attendance, electricity use, and possession of automobiles.

The Components Analysis and Change Patterns

A more systematic identification of patterns of change and of non-change emerges from an examination of the components analysis, giving particular attention to those factors that came out with high loadings on one or more indicators of change (or non-change). Details for seven such factors are presented in Table 29.

The first two shown (the third factor of Matrix A and Matrix B) are very similar. Both pick up modernization lead traits in their high positive loadings on proportions of young females unmarried in 1960, on dwellings with running water in 1960, and on size of capital city in 1940. Both have strong negative loadings on proportions non-Catholic in 1940, and on changes in proportions not eating wheat bread. Both have moderately high loadings (.438 and .440) on changes in male white-collar employment. The only variables that were not common to the two matrices but took a high loading on the third factor of either were: the difference in literacy rates between adult urban males and those in their teens (a positive loading of .534 in Matrix A); rural school continuation rates in 1942 (.463 in Matrix B); and a high positive loading of .637 on increases in the proportions of females in white-collar employment.

TABLE 29

SELECTED FACTORS WITH ONE OR MORE HIGH LOADINGS ON CHANGE VARIABLES

Variable Number	Factor Matrix	A	B	D	A	B	B	D
	Factor Number	3	3	7	6	5	6	2
Population distribution and change								
2	Density 1960	.359	.343	....	.213	-.331	-.436	....
4	Urban 1940	.351	.354	.060	-.022	-.061	.038	-.352
8	Capital urban 1940	-.080	-.119	....	-.048	.120	.068	....
10	Capital size 1940	.561	.660	....	.272	-.245	.087	....
12	Pop. 50,000+ 1960	....	.263	.473	....	-.330	.186	-.429
13	Urban 1960/1930	....	-.430	.173	....	-.414	-.089	.022
14	Urban 1960-1950/1960-1940	.012	.063	-.337	-.872	.933	.105	-.109
15	In-migrants 1940	-.245	-.306	-.011	.260	-.222	.194	-.349
Transportation								
18	RR/Pop. 1940	-.037	....	....	.922	....	....	....
26	Roads/area[B] 1940	....	.182	....	....	-.015	-.220	....
27	Roads/area 1960	....	.283	....	....	.038	-.528	....
28	Roads paved 1960	.497	....	....	.609	....	....	....
29	Bicycles/pop. 1940	....	.013	.485	....	-.094	.063	-.122
30	Bicycles/pop. 1960	-.003	....	....	.121	....	....	....
31	Bicycles/pop. 1960-1940	....	....	.019	....	....	....	-.066
32	Autos/pop. 1940	.155	.182	.306	.120	-.098	.271	-.378
34	Autos/pop. 1960/1939	....	....	-.149	....	....	....	.383
35	Autos/pop. 1960-1940	....	....	.246	....	....	....	.079

Utilities and communication								
36	Elect/capita 1940	....	.551	.259	....	.176	.078	-.281
37	Elect/capita 1960	.544	.198	....	-.198	.328	.149	....
38	Elect/capita 1960-1940	....	....	.352	....	....	....	-.240
39	Movies/pop. 1940	-.061	-.124	-.025	.181	-.177	.209	-.214
40	Movies/pop. 1960	.399	.355	....	.017	-.071	.060	....
41	Movies/pop. 1960-1940	....	....	.153	....	....	....	-.249
42	Library use 1940	.767	.771	.216	-.023	.024	.165	-.373
44	Radio 1960	.201	.248	.162	-.053	-.020	.031	-.380
Marriage and fertility rates								
45	Single F 20-24 1960	.580	.728	....	-.148	.136	.166	....
47	F under 5 yrs./F 1960	-.887	-.872	....	-.087	.103	.129	....
Labor force participation								
58	EcAct F 10+ 1940	.504	.412	.070	-.088	.045	-.031	-.242
59	EcAct F 12+ 1960	.144	.107	.132	-.026	-.010	-.083	.117
60	EcAct F 1960-1940	....	-.066	.270	....	-.091	-.159	.448
61	Devel. index 1950	....	.286	....	....	-.135	.158	....
Employment of youth								
62	Employ 8-11 M 1960	.035	.060	-.206	.011	-.075	.046	.210
63	Employ 8-11 F 1960	.036	.051	-.077	-.139	.025	-.255	.478
White collar and professional workers								
64	Collar/EcAct M 1940	-.029	-.087	.008	-.067	.074	.118	-.227
66	Collar/EcAct M 1960-1940	.438	.440	.515	.296	-.409	-.091	-.271
67	Collar/EcAct F 1940	....	....	.032	....	....	....	-.375
69	Collar/EcAct F 1960-1940	....	.637	.328	....	-.272	-.194	-.092

TABLE 29--Continued

Variable Number	Factor Matrix	A	B	D	A	B	B	D
	Factor Number	3	3	7	6	5	6	2
70	Clerical/EcAct T 1960	.059	.034	.208	.092	-.106	.117	-.270
74	Prof/EcAct M 1960	.157	.117	....	.040	-.062	-.003	....
75	Prof/EcAct F 1960	....	.331	....	....	.356	.019	....
Public administration								
77	P.A./EcAct M 1940	-.229	-.339	....	-.215	.207	.025	....
Agriculture								
79	Ag/EcAct M 1940	-.173	-.205	-.061	.099	-.100	-.188	.389
80	Ag/EcAct M 1960	-.222	-.227	-.318	.025	.079	.065	.199
81	Ag/EcAct M 1960-1940	-.177	-.150	-.672	-.305	.522	.405	-.185
82	Ejidos/Ag Pop 1940	-.177	.029	.064	-.305	-.025	-.126	.158
83	Ag Labor/Ag M 1940	-.223	-.206	-.206	.168	-.212	.125	-.194
84	Ag Labor/Ag M 1960	.144	.105	.077	-.021	-.028	.007	-.244
85	Ag Prop/Ag M 1940	-.036	-.083	-.141	-.194	.217	-.179	.235
86	Ag Prop/Ag M 1960	-.136	-.098	-.047	.071	-.008	-.011	.241
87	Ag Prop/Ag M 1960-1940	....	-.058	.060	....	-.159	.105	.064
89	Farm mechanized 1950	-.052	-.043	.010	.150	-.170	.314	-.546
91	Ag inc. over $500 1960	-.131	-.165	-.078	-.101	.105	.231	-.341
94	Returns Glick 1950-1930	....	-.532	-.158	....	-.204	.158	-.221
Manufacturing								
98	Mfg/EcAct M 1960-1940	....	....	.864	....	....	....	.016
103	Mfg inc. over $500 1960	-.166	-.210	....	.033	-.015	.131	....

105	Pay/Emp Fact 1930	....	-.080	....	....	-.195	.100	....
107	Pay/Emp Fact 1950	.163	.174	....	.086	-.070	.134	....
109	Pay/Emp Fact 1955/1940	.261	....	-.062	-.044	....	....	-.151
111	Mining/EcAct M 1940	....	.212	....	....	.230	.483	....
Culture traits								
125	Barefoot M 1940	-.118	....	-.076	-.228	....	....	.867
127	Barefoot M 1960	....	-.133	....	....	.207	-.570	....
133	Barefoot M 1940-1950	....	....	-.194	....	....	....	.835
134	Barefoot M 1950-1960	....	....	-.064	....	....	....	.912
135	Barefoot M 1940-1960	-.261	-.385	-.146	-.199	.113	-.600	.928
128	Barefoot F 1940	-.094	....	-.018	-.162	....	....	.791
136	Barefoot F 1940-1950	....	....	-.024	....	....	....	.775
137	Barefoot F 1950-1960	....	....	.013	....	....	....	.880
138	Barefoot F 1940-1960	....	-.262	-.010	....	.039	-.533	.876
123	Barefoot urban 1960	....	.249	.123	....	-.051	-.789	.669
131	Barefoot M/F 1940	-.114	.251	....	-.255	.237	-.163	....
132	Barefoot M/F 1960	....	.007	....	....	.319	.206	....
113	Non-Catholic T 1940	-.647	-.784	....	.177	-.153	-.083	....
114	Non-Catholic T 1960	....	-.389	....	....	-.268	-.402	....
43	Running water 1960	.659	.662	....	.011	-.079	-.024	....
115	Sleep on floor 1940	....	.215	....	....	.006	.102	....
116	Sleep on bed 1940	-.022	.000	....	.112	-.091	.237	....
117	Nonwheat T 1940	-.021	.295	....	.013	.065	.157	.078
119	Nonwheat T 1960	....	-.031	....	....	-.006	.090	....
120	Nonwheat 1940-1950	....	....	-.076	....	....	....	.155
121	Nonwheat 1950-1960	....	....	.081	....	....	....	.222
122	Nonwheat 1940-1960	-.604	-.513	-.010	-.185	.209	.080	.224

TABLE 29--Continued

Variable Number	Factor Matrix	A	B	D	A	B	B	D
	Factor Number	3	3	7	6	5	6	2
Education Literacy								
140	Literacy 10+ T 1940	....	....	-.010	....	....	....	-.390
141	Literacy 10+ T 1960	....	....	-.005	....	....	....	-.419
153	Literacy 6+0 Sch M 1940	-.106	....	....	.013	....	....	....
155	Literacy 10-14 M 1930	.027	-.013	....	.007	.018	-.021	....
156	Literacy 10-14 F 1930	....	.026	....	....	-.031	.162	....
157	Literacy 10-14 M 1940	....	-.020	.050	....	-.033	.021	-.213
158	Literacy 10-14 F 1940	....	.016	.032	....	-.015	.144	-.358
159	Literacy 10-14 M 1960	....	.023	....	....	.004	-.029	....
160	Literacy 10-14 F 1960	....	.010	....	....	.025	.052	....
161	Literacy 10-14 M 1940-1930	.020	....	.101	.072	....	....	-.270
162	Literacy 10-14 F 1940-1930	....	....	.070	....	....	....	-.135
163	Literacy 10-14 M 1960-1940	-.007	....	-.122	-.115	....	....	.004
164	Literacy 10-14 F 1960-1940	....	....	-.036	....	....	....	.259
165	Lit. 6+ 1960-1950/1960-1940	....	....	.084	....	....	....	.013
Literacy by age, 1960								
	Urban males							
168	40-49	-.267	....	....	.072	....	....	....
170	25-29	.042	....	....	-.067	....	....	....
	Rural females							
192	40-49	.002	....	....	-.177	....	....	....
Age differences in literacy, 1960								
	Urban males							
198	(15-19)-(40-49) MU	.534	....	-.104	.076	....	....	.129
199	(40-49)-(60+) MU	....	....	-.008	....	....	....	-.040

	Urban females							
200	(15-19)-(40-49)	.006	....	.058	.131	....	....	.652
201	(40-49)-(60+)	....	....	.065	....	....	....	-.408
	Rural males							
202	(15-19)-(40-49)	-.098	....	-.083	.141	....	....	.163
203	(40-49)-(60+)	....	....	-.047	....	....	....	-.264
	Rural females							
204	(15-19)-(40-49)	-.186	....	.155	.192	....	....	.687
205	(40-49)-(60+)	....	....	-.095	....	....	....	-.452
Sex differences in literacy								
208	40-49 MU-F	-.158	....	.134	.120	....	....	.773
218	40-49 MR-F	-.090	....	.167	.091	....	....	.839
221	20-24 MR-F	-.093	....	....	.243	....	....	....
Adult level of schooling								
228	Adult 30+0 Sch M 1960	.027	....	....	.066	....	....	....
258	Adult 30+0 Sch M 1950-1960	....	....	.098	....	....	....	.319
236	Adult 25+7+Sch M 1950	.095	....	....	.070	....	....	....
238	Adult 30+7+Sch M 1960	.192	....	.193	-.014	....	....	-.253
239	Adult 30+7+Sch F 1960	....	....	.274	....	....	....	-.407
242	Adult 30+10+Sch M 1960	.241	....	....	-.036	....	....	....
Enrollment								
265	Enrol 6-14 T 1937	-.155	-.239	.028	-.049	.093	-.038	-.105
266	Enrol 6-14 T 1960	....	-.146	-.039	....	.101	-.345	.161
267	Enrol 6-10 M 1930	.042	-.045	.029	-.045	.030	-.204	.025
273	Enrol 6-14 urban 1960	-.079	-.070	-.118	-.424	.616	.212	-.066
274	Enrol 6-14 rural 1960	-.042	-.223	.037	-.015	-.098	-.629	.301
275	Enrol 6-14 UR 1960	-.035	....	-.116	-.307	....	....	-.216

TABLE 29—Continued

Variable Number	Factor Matrix	A	B	D	A	B	B	D
	Factor Number	3	3	7	6	5	6	2
	Enrollment at 6 yrs. and monthly income in pesos, 1959							
278	Enrol 6/inc. $200	.002	-.016	....	-.120	.087	-.074	....
280	Enrol 6/$601-$1,000	....	-.052	....	....	.110	.004	....
282	Enrol 6/(601-1,000)-(200)	-.018	.028	....	-.090	.077	-.113	....
	Enrollment at 6 yrs. and father's occupation, 1959							
283	Enrol 6/Ag 1959	.014	.063	....	-.235	.215	.014	....
284	Enrol 6/Pro 1959	....	-.169	....	....	-.124	.077	....
	Progress in school							
	Continuation rates—primary school Beginning of year enrollments							
293	B 4/3 rural 1942	.033	.046	....	-.127	.218	.110	....
296	B 4/3 urban-rural 1942	....	.249	.139	....	-.213	-.225	.008
299	B 4/3 urban 1960	....	....	-.082	....	....	....	.429
304	B 4/3 rural 1960	.141	.068	....	.052	-.043	-.178	....
307	B 4/3 urban-rural 1960	....	-.054	....	....	.165	-.026	....
308	B 4/3 urban 1960-1942	-.143	....	-.091	-.065	....	....	.149
309	B 4/3 rural 1960-1942	.109	....	-.022	.230	....	....	.132
330	B 5/1 urban 1942	....	.241	....	....	.020	.024	....
331	B 5/1 rural 1942	....	.463	....	....	.121	-.185	....
332	B 5/1 urban 1960	....	-.119	....	....	.002	-.153	....
333	B 5/1 rural 1960	....	.041	....	....	-.024	-.090	....

	Secondary school							
338	Con Sec 3/1 M 1960	-.226	....	....	-.192	....	....	....
Age grade progress, 1963								
347	Age 10 Gr 1 MU	....	-.102	....	....	-.130	-.121	....
348	Age 10 Gr 1 MR	....	.086	-.111	....	-.152	.039	.035
349	Age 10 Gr 1 MR-MU	.155	....	-.000	-.019	....	....	.114
359	Age 10 Gr 1 FU	....	.140	....	....	.036	-.148	....
360	Age 10 Gr 1 FR	.140	.116	-.021	-.022	.003	-.042	.198
361	Age 10 Gr 1 FR-FU	....	....	-.149	....	....	....	-.146
Pass rates								
368	Pass 2/Pres urban 1942	-.065	.028	....	.177	-.189	.261	....
369	Pass 2/Pres rural 1942	.091	.133	....	-.029	-.006	.158	....
376	Pass 2/Pres urban 1960	....	.268	....	....	.112	-.121	....
377	Pass 2/Pres rural 1960	.018	.174	....	-.266	.192	.064	....
School facilities								
	Schools incomplete							
389	Sch Incomp urban 1942	.037	....	-.178	.073	....	....	.220
390	Sch Incomp rural 1942	-.117	....	-.119	.033	....	....	.201
396	Sch Incomp urban 1942-1960	....	....	.044	....	....	....	-.106
397	Sch Incomp rural 1942-1960	....	....	-.202	....	....	....	-.057

The last is particularly interesting in view of the zero-order correlations discussed earlier.

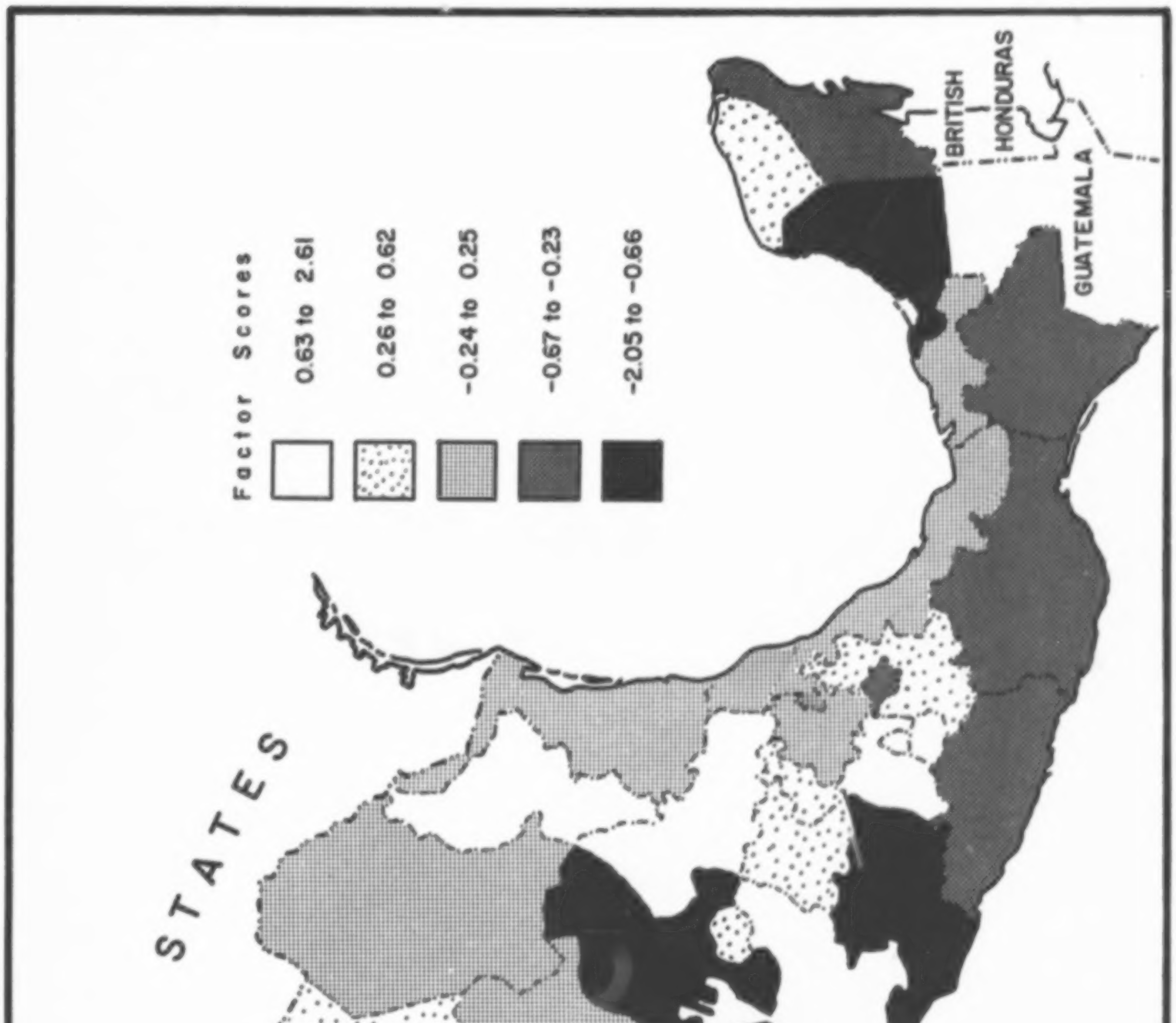
The next factor delineated in Table 29 (Factor 7 of Matrix D) is also in part a modernization lead factor, but it is centered on changes in male occupational structure. The highest loadings are .864 for increased employment in manufacturing, -.672 for 1960-1940 proportions in farming, and .515 for increased white-collar proportions. Scores on this factor have been mapped in Figure 14. Supporting them are moderately high scores on proportions living in large cities in 1940 and possession of bicycles in 1940 (which carry a heavier loading than automobiles).

Columns 4 and 5 of Table 29 both pick up urbanization or its timing, but they are in some respects opposites. Factor 6 from Matrix A has a strong negative loading of -.872 on recency of urbanization (variable 14). This goes along with relatively early development and a good transport network; there is a positive loading of .922 on railroad mileage per capita in 1940 and of .609 on paved roads in 1960. However, none of the occupational, cultural, or educational variables comes through in this cluster with the lone partial exception of a negative loading of -.424 on urban enrollment rates in 1960. Evidently where transportation facilities backed up early growth but the pace of urbanization was not sustained, other changes reverted toward average patterns. Factor 5 from Matrix B is predominantly a specification of areas of belated growth, with low rates of urbanization for 1930-1960 taken as a whole (loadings of .933 on recency of urbanization and -.414 on ratio of 1960 to 1930 urban population). These are areas in which proportions in agricultural employment have been maintained (loading of .522) and proportions of males in white-collar jobs have not grown, nevertheless these areas do not stand out for frequency of indigenous culture traits.

Fig. 14.—Matrix D, Factor 7.

Variable Number		Factor Loadings (±.800 and Above)
98	Mfg/EcAct M 1960-1940	.864
81	Ag/EcAct M 1960-1940	-.672
66	Collar/EcAct M 1960-1940	.515

A short-cut estimate of the rank of the Federal District for these variables is 12 (from a high of 1 to 32).


Factor Scores
0.63 to 2.61
0.26 to 0.62
-0.24 to 0.25
-0.67 to -0.23
-2.05 to -0.66
UNITED STATES
BRITISH HONDURAS
GUATEMALA
A

The last two columns of Table 29 depict factors that focus distinctly on the presence or absence of indigenous populations with associated behavior and conditions. The last factor (Factor 2 from Matrix D) is repeated from Table 3 and is by now a familiar pattern. It has high loadings on all the barefoot items and their changes and on sex differences in literacy of 1940 adults. The geographic pattern (see Figure 15) is as simple and unambiguous in its regional division of Mexico as any one could draw; the indigenous Indian populations determine the darker zones to the south and east and just around the Federal District, but they do not extend beyond it to the north or west. It is interesting to compare this factor with Factor 6 of Matrix B (shown to the left of it in Table 29). The latter factor is mainly an inverse of the former, with negative loadings on indigenous cultural traits and changes in them. It adds also an interesting twist that might not have been anticipated: negative loadings on road mileage relative to area and on rural school enrollments in 1960. (The road variable points immediately to the sparsely settled states which generally had light shadings on Figure 15). The sign of the enrollment variables is especially interesting and will be reconsidered in Chapter VI.

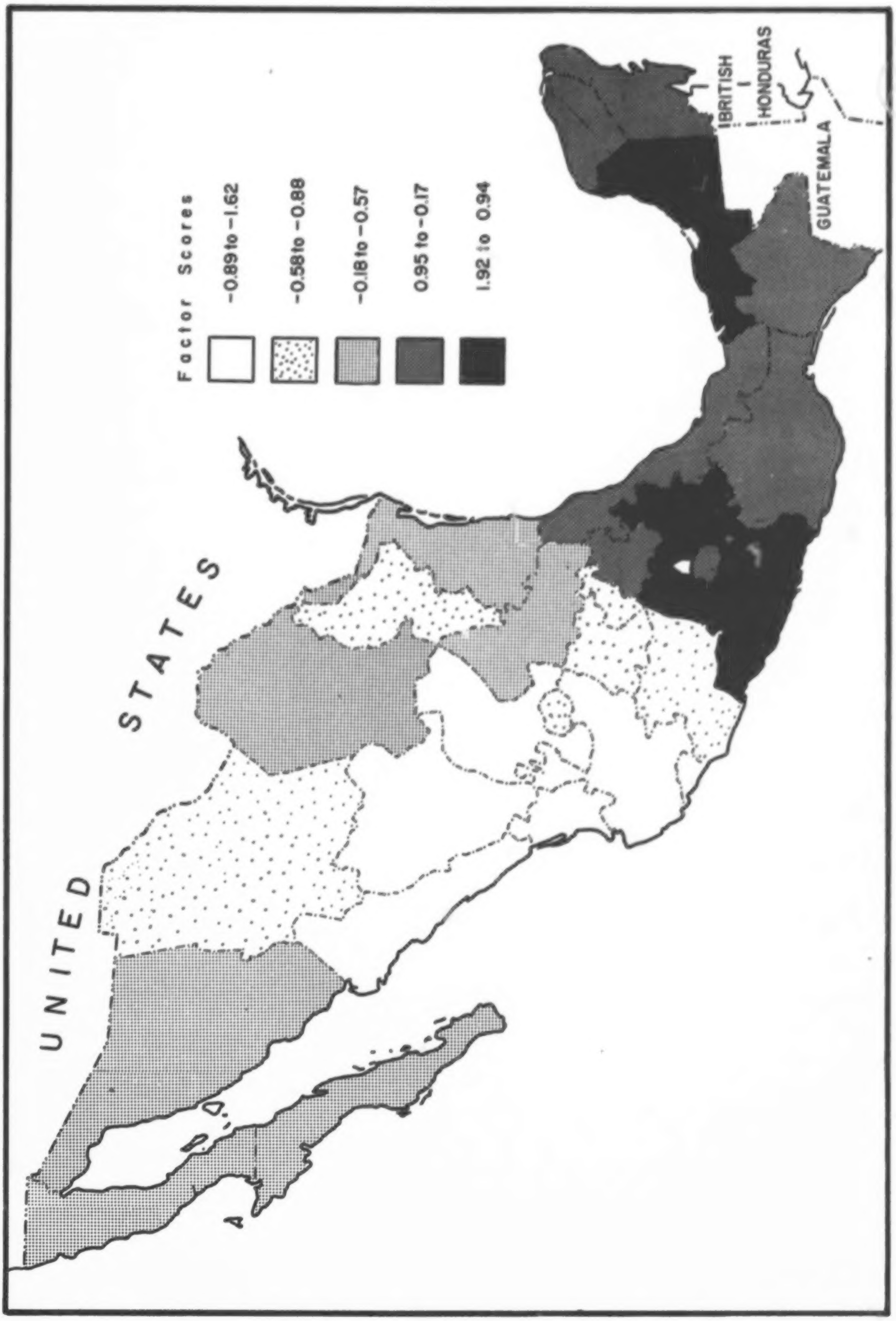
Migration

One of the aftermaths of the Revolution of 1910 was the shaking loose of people from the land, enabling them to move in search of better opportunities. In 1940, the range among states was from 38 per cent to 98 per cent of the population native to the state in which they were residing. While this range in percentages did not change, in 1960 the median was 89 per cent compared with 93 per cent in 1940; the mean for all Mexico was only slightly lower, at six-sevenths of the total population of 35 million.

Fig. 15.—Matrix D, Factor 2.

Variable Number		Factor Loadings (±.800 and Above)
125	Barefoot M 1940	.867
113	Barefoot M 1940-1950	.835
114	Barefoot M 1950-1960	.912
135	Barefoot M 1940-1960	.928
137	Barefoot F 1950-1960	.880
138	Barefoot F 1940-1960	.876
218	Literacy 40-49 MR-FR	.839

A short-cut estimate of the rank of the Federal District for these variables is 17 (from a high of 1 to 32).


Factor Scores
-0.89 to -1.62
-0.58 to -0.88
-0.18 to -0.57
0.95 to -0.17
1.92 to 0.94
UNITED STATES
BRITISH HONDURAS
GUATEMALA

Since 1940 the major net movements of the Mexican population has been from villages to cities and from smaller to larger cities. Most of the migrants have settled in states contiguous to the ones in which they were born, but there has been considerable movement to the Federal District and to states in the north. In rural areas there has also been movement from areas of dry or relatively unproductive land to places where irrigation is available.

The census of 1960 asked respondents the state in which they were born.[1] The evidence supports a priori expectations of movement predominantly toward areas of economic development. States with the highest proportions of residents who had come from elsewhere included the Federal District, Baja California Norte, Nuevo Leon, Sonora, Chihuahua, and Tamaulipas in the north. Aguascalientes, Colima, Quintana Roo, and Nayarit are also among those with a relatively high proportion of in-migrants. Table 30 shows numbers of in-migrants, their percentage of the population of the state in which they were living in 1960, and the net coefficient of migration for each state. (The coefficient was computed by dividing the number born in the state, whether resident or not in 1960, into the net in-migration that had occurred to 1960; net in-migration was the population living in the state who were not born there minus those who were born in the state but were living elsewhere.) According to the 1960 census, out of the five million living in a state other than where they were born, about two million, or 40 per cent, were living in the Federal District.

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[1] Myers (op. cit., p. 69) lists some weaknesses of this enumeration: (a) there was no indication of when migration took place; the migrant could have left his state of birth at any time after infancy, (b) those who had migrated but returned or who migrated but died prior to enumeration were not included, (c) there was no separation of rural from urban migrants, (d) there was no indication of movement within individual states.

TABLE 30

INDICES OF INTENSITY OF LIFE-TIME IN-MIGRATION; STATES WITH NET IN-MIGRATION, 1960

States with Net In-migration	Coefficient of Attraction[a]	Total In-migrants as % of Present Population	Number of In-migrants
Baja California Norte	+1.111	62.02	289,010
Colima	+ .074	26.44	42,859
Chihuahua	+ .107	16.10	191,484
Distrito Federal	+ .569	40.33	1,913,638
Morelos	+ .184	26.09	99,915
Nayarit	+ .022	15.70	60,878
Nuevo Leon	+ .131	23.58	251,270
Quintana Roo	+ .278	40.37	19,401
Sonora	+ .109	18.03	139,717
Tamaulipas	+ .239	28.71	288,315
Veracruz	+ .015	9.85	267,369

[a] The coefficient of attraction is $(M_1-M_0)/B$ where: M_1 = number of in-migrant residents, M_0 = number born in the state who live elsewhere, and B = total number (of living Mexican population) born in this state.

Table 31 lists the states with a net out-migration and the proportion of the resident population of each state living elsewhere. The Federal District drew most of its in-migrants from states in the center, while migration in the north was mainly to contiguous states. Long distance streams over several states are also apparent in the movements from the central states to the north and from the north to center. The states with low rankings on indices of development (as Oaxaca and Guerrero) appear here with relatively low gross

TABLE 31

EXTENT OF OUT-MIGRATION AND MAJOR DESTINATIONS OF OUT-MIGRANTS; STATES WITH NET OUT-MIGRATION, 1960

States with Net Out-migration	Out-migrants as Per Cent of Present Population at Origin: Total	Out-migrants as Per Cent of Present Population at Origin: Now Living in	
		D.F.	North[a]
Pacific North			
Baja California Sur	33.3	5.4	18.6
Sinaloa	14.0	1.2	10.1
North			
Coahuila	20.9	2.7	13.6
Durango	22.3	2.1	13.4
San Luis Potosi	21.4	3.6	12.3
Zacatecas	31.3	3.7	11.4
Center			
Aggascalientes	35.0	9.0	7.9
Guanajuato	25.1	13.9	4.2
Hidalgo	25.0	17.2	.8
Jalisco	18.0	5.1	5.0
Mexico	23.3	17.5	.9
Michoacan	20.9	11.1	2.9
Puebla	13.5	7.0	.4
Queretaro	33.2	18.1	2.2
Tlaxcala	23.7	13.7	.9
Gulf of Mexico			
Campeche	18.0	4.6	1.4
Tabasco	10.8	2.2	.4
Yucatan	10.8	3.9	.6
Pacific South			
Chiapas	6.3	3.0	.9
Guerrero	9.7	3.9	.4
Oaxaca	12.3	5.7	.6

[a] States of the North with net in-migration: Baja California Norte, Chihuahua, Nuevo Leon, Sonora, and Tamaulipas.

movements either out or in, a phenomenon that ties in very neatly with Hägerstrand's treatment of migration fields as indicators of mean private information fields and with his emphasis on the latter and on gaps between information fields in the explanation of spatial diffusion of innovative behaviors.[1] Figures 16 to 20 portray the migration streams discussed above. Most striking on the in-migration maps (Figures 16 and 17) are the relatively local concentrations of recruits to the southern and central cities, including the Federal District, in contrast to the long-distance origins of recruits to the north and to the northwest in particular. This is in part a reflection of the initial disparate population bases, which should, of course, be taken into account if our purpose were to explain the migration patterns. On the other hand, the effects of various in-migrant groups on observations concerning traits of resident populations depend upon their representation at destination regardless of the total size of populations at either origins or destinations. Figures 16 and 17 are indicative of the kinds of culture areas from which the in-migrant populations derive.

When in-migrants come from a rural setting, they are likely to enter the occupational and social streams at a different level than those who come from another urban area. It is of considerable interest, therefore, to distinguish migrant streams by the likelihoods that they will originate in more urban or more rural places. Table 32 does this by showing the distributions of in-migrants by the proportions of males employed in agriculture in the migrant's state of birth. Relatively high percentages of in-migrants to Nuevo Leon and Tamaulipas come from predominantly urbanized states, and the origins

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[1] Torsten Hägerstrand, Diffusion of Innovations as a Spatial Process, trans. from Swedish (1957) by Allan Pred (Chicago: University of Chicago Press, 1967).

Fig. 16.—Origins of in-migrants to central and southern states (born in other states), 1960.

4

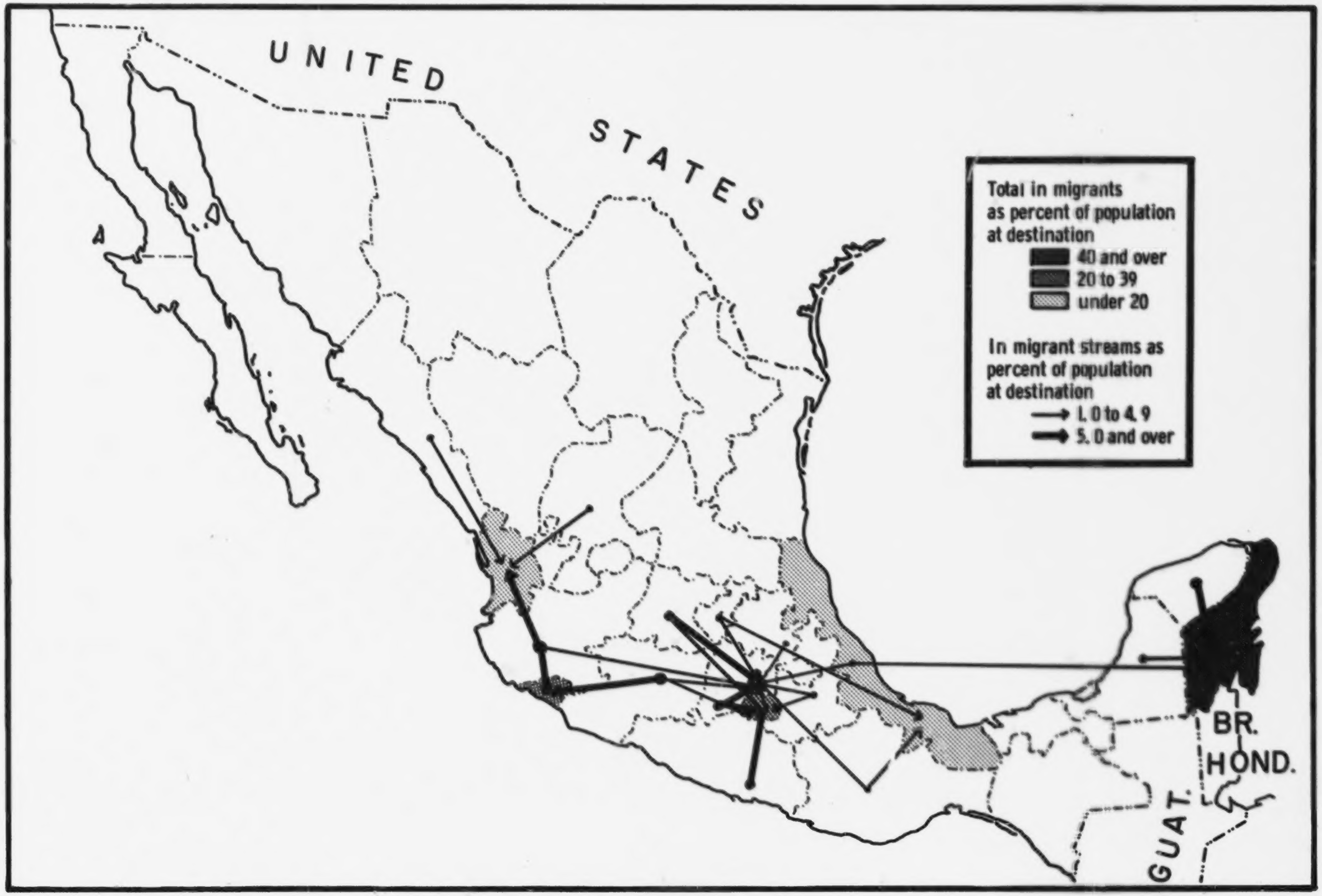

UNITED STATES
Total in migrants as percent of population at destination
40 and over
20 to 39
under 20
In migrant streams as percent of population at destination
1.0 to 4.9
5.0 and over
BR. HOND.
GUAT.

Fig. 17.--Origins of in-migrants to northern states (born in other states), 1960.

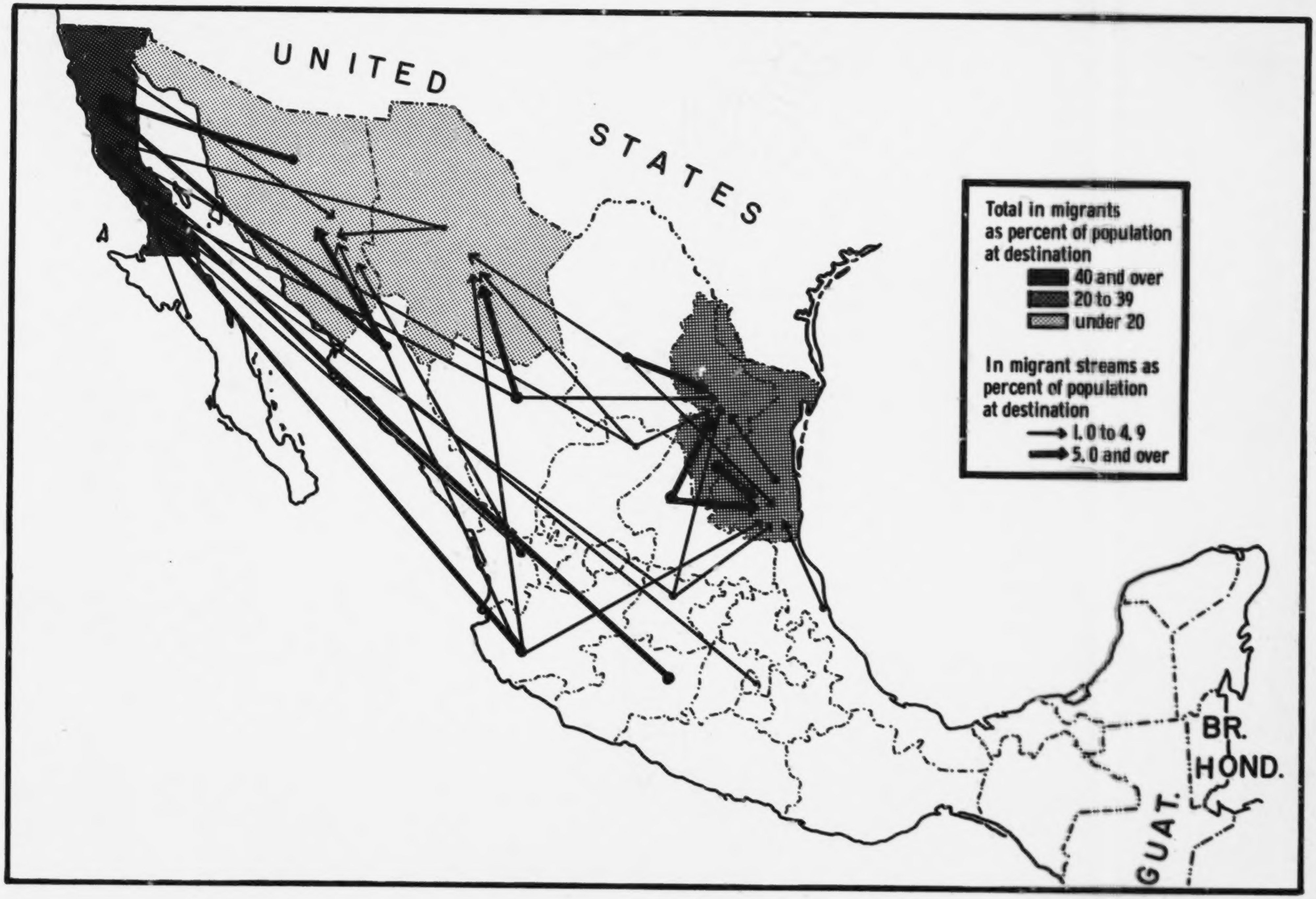

UNITED STATES
Total in migrants as percent of population at destination
40 and over
20 to 39
under 20
In migrant streams as percent of population at destination
1.0 to 4.9
5.0 and over
BR. HOND.
GUAT.

Fig. 18.--Destinations of out-migrants born in southern states, 1960.

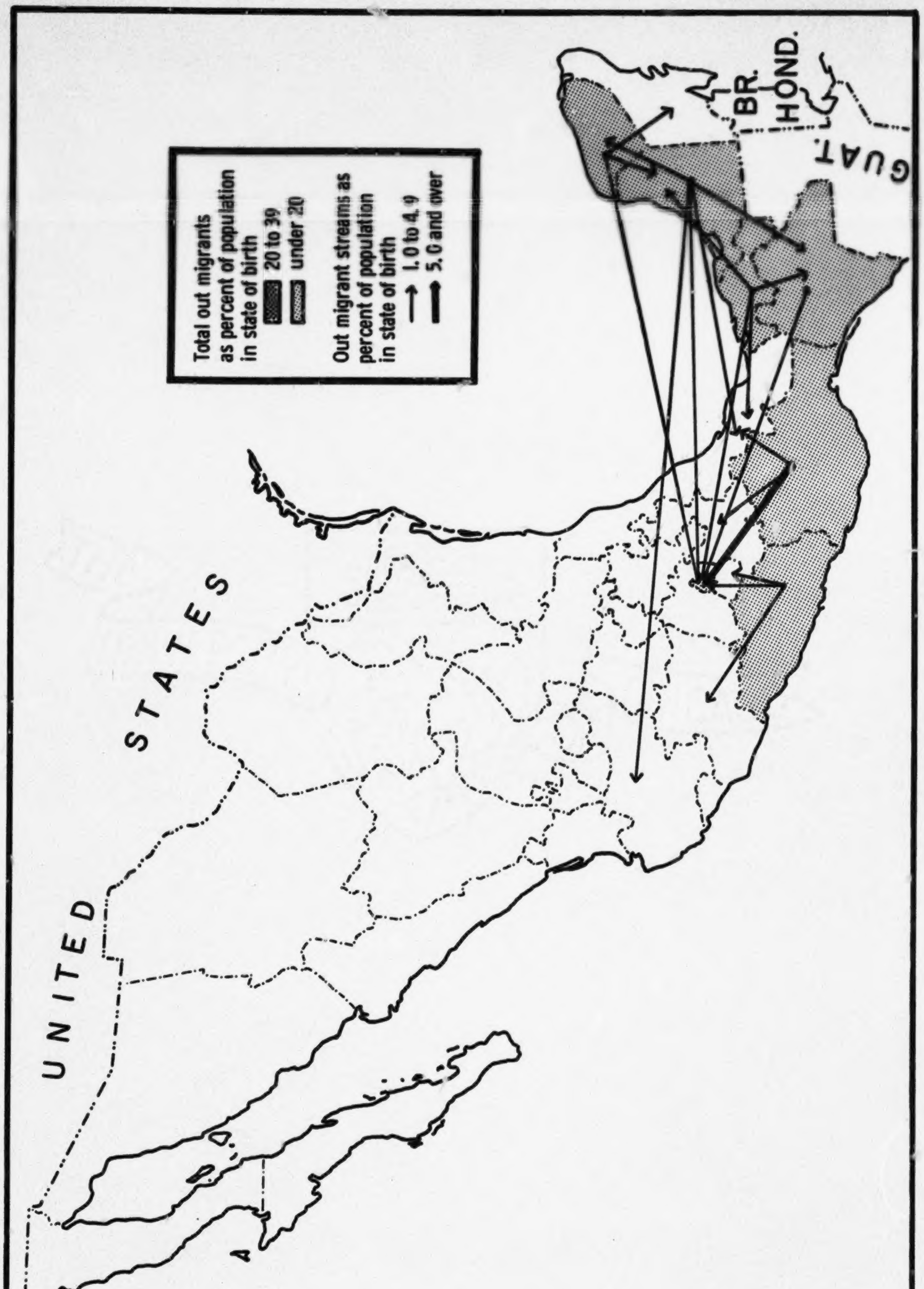

UNITED STATES
BR. HOND.
GUAT.
A
Total out migrants as percent of population in state of birth
▩ 20 to 39
▨ under 20
Out migrant streams as percent of population in state of birth
→ 1.0 to 4.9
→ 5.0 and over

Fig. 19.--Destinations of out-migrants born in north and north Pacific states.

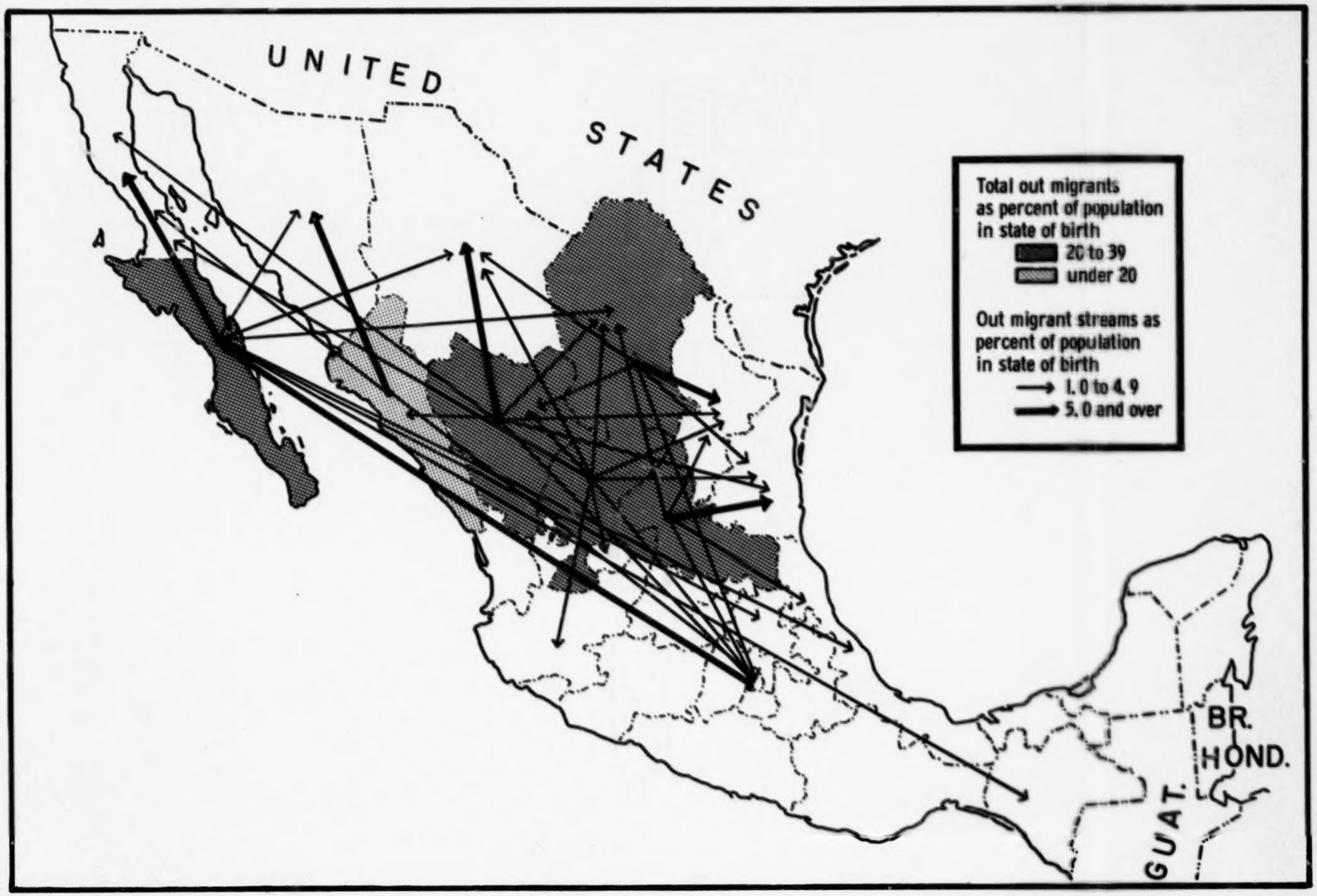
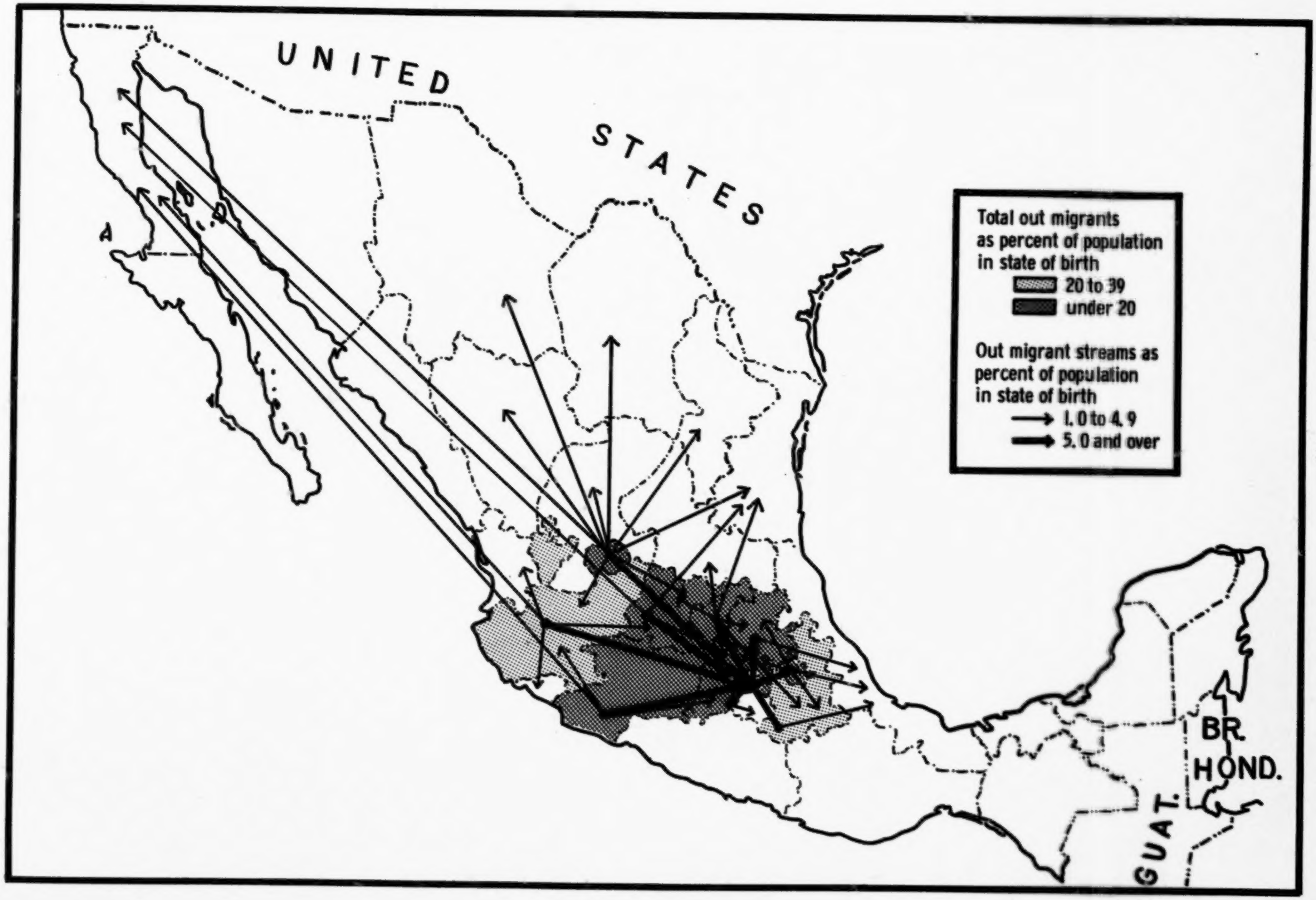

UNITED STATES
Total out migrants as percent of population in state of birth
20 to 39
under 20
Out migrant streams as percent of population in state of birth
→ 1.0 to 4.9
➡ 5.0 and over
BR. HOND.
GUAT.

Fig. 20.--Destinations of out-migrants born in central states, 1960.


UNITED STATES
Total out migrants
as percent of population
in state of birth
▨ 20 to 39
■ under 20
Out migrant streams as
percent of population
in state of birth
→ 1.0 to 4.9
➡ 5.0 and over
BR. HOND.
GUAT.

of in-migrants to Colima and Nayarit are from comparatively urbanized settings. At the other extreme, Morelos and Veracruz attracted individuals from highly agricultural states, followed closely in this respect by the Federal District. Baja California Norte is especially notable for the wide diversity in the origins of its in-migrants.

TABLE 32

DISTRIBUTION OF IN-MIGRANTS FROM STATES WITH VARIOUS PROPORTIONS OF POPULATION ENGAGED IN AGRICULTURE

States with Net Lifetime In-migration, 1960	Percentages of Total In-migrants from States in Which the Following Percentages of Economically Active Males were Engaged in Agriculture in 1960				
	75+	70-74	60-69	50-59	Under 50
Baja California Norte	22.6	6.0	24.3	42.1	4.9
Colima	25.1	1.4	4.7	64.9	3.8
Chihuahua	22.5	34.8	8.9	14.8	19.0
Federal District	30.9	16.5	38.9	10.9	2.8
Morelos	48.7	11.3	27.6	4.4	7.9
Nayarit	15.3	4.7	14.8	61.9	3.2
Nuevo Leon	13.1	33.2	8.5	17.4	27.8
Quintana Roo	2.7	3.3	87.6	4.2	2.2
Sonora	16.8	7.5	41.6	23.8	10.4
Tamaulipas	10.6	24.9	20.0	8.5	36.0
Veracruz	34.1	38.9	9.9	10.7	6.4

The remaining maps take the opposite perspective, looking out from the point of origin to various destinations. Here, the long-distance attractive power of the Federal District is somewhat more in evidence. Even though the southeastern states contribute relatively little to the population of the Federal District relative to migrants of other origins, and the proportions of their populations that have left for Mexico City are small, the orientation of the people of the southeast to the nation's capital is clear enough (Figure 18) and there can be no doubt that this is the node from which informal messages (attitudes and information) are carried to the people back home. Long-distance out-migrant streams from the north also tend to converge on the Federal District, but this is almost by definition, and the role of the Federal District in the orientation of migrants is by no means dominant even for urban-directed migrants from the north (Figure 19). The Federal District's dominance in the attraction of migrants from the central states is undisputable; in fact, for most of these states the number of native sons (and daughters) resident in Mexico City runs over 5 per cent of the local resident populations. The two-directional play of these central migration fields are unmistakable despite the competitive attractions of northern areas.

To infer that all of these gross migration streams, even those over long distances, were predominantly to urban destinations would be a serious misinterpretation. It is no accident, for example, that most of the states attracting large proportions of long-distance migrants were included among those with heavy investments in hydraulic projects between 1947 and 1958.[1]

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[1] Shorter-distance migrations normally account for a much larger proportion of rural-to-rural than of urban-directed movements, and these shifts are very inadequately represented using area boundaries so gross as states.

Further evidence of a relationship between rural development and migration lies in correlations among variables relating to agriculture. Table 33 displays all the zero-order correlations with migration measures. The most agricultural areas maintained a stable population (in terms of interstate migration) from 1940 to 1960. Areas where farms were mechanized and where incomes from agriculture averaged above 500 pesos monthly also attracted migrants to both farm and city.

Though areas with high proportions of males in manufacturing generally attracted out-of-state migrants, the correlations were not high. Manufacturing characterized by high proportions of females again was part of a low in-migration (or a net out-migration) pattern, but where greater proportions of the population in manufacturing earned over 500 pesos there was significant in-migration (.738). Overall, migration flows were quite in line with the movements from lagging to leading areas, from those with less to those with more modern facilities and opportunities, as would be expected. Less predictably, the magnitudes of most of the zero-order correlations of migration with other variables were remarkably stable over time.

Preceding studies of migration in Mexico have also attributed movement as a response to economic opportunity. Randall demonstrated an economic motive for migration by her finding that states which had a large number of migrants in 1950 were those in which there were relatively high minimum wages in 1940.[1] Zenteno found migration to be correlated with the proportion of the population in non-agricultural occupations, earning higher incomes, and with higher

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[1] Laura Randall, "Labor Migration and Mexican Economic Development," Social and Economic Studies, I (March, 1962), 73-81.

TABLE 33

CORRELATIONS OF MALE IN-MIGRATION RATES WITH OTHER VARIABLES

	Male In-migrants as Percentage of Resident Male Population		
	1940	1950	1960
Population distribution			
Density 1940	-.499	-.451	-.556
Density 1960	-.365	-.304	-.374
Urban 1940	.555	.543	.457
Urban 1950	.575	.585	....
Urban 1960	.566	.598	.517
Pop. 50,000+, 1960	.469	.475	.440
Capital/dummy 1960	.031	-.021	....
Capital/urban 1940	.363	.316	.382
Capital/urban 1960	.292	.242	.297
Capital size 1940	-.141	-.149	-.240
Capital size 1960	.054	.061	.017
Urban 1960/1930	.634	.684	....
Urban 1960-1950/1960-1940	-.030	-.041	....
In-migrant 1940	....	.968	.855
Transportation			
RR/Pop. 1940	.379	.374	....
RR/Pop. 1960	.366	.335	....
RR/Area 1940	.026	.054	....
RR/Area 1960	-.086	-.063	....
Roads/Pop.[b] 1940	.691	.673	....
Roads/Pop. 1960	.398	.360	....
Roads/area[b] 1940	.196	.230	....
Roads/area 1960	-.215	-.152	....
Autos/Pop. 1940	.610	.609	.614
Autos/Pop. 1960	.582	.606	.642

TABLE 33--Continued

	Male In-migrants as Percentage of Resident Male Population		
	1940	1950	1960
Utilities and communication facilities			
Electricity/capita 1940	.150	.177	.152
Electricity/capita 1960	.313	.353	.436
Electricity 1960-1940	.243	.321	....
Movies/pop. 1940	.751	.736	.764
Movies/pop. 1960	.430	.424	.342
Movies/pop. 1960-1940	-.154	-.138	....
Library use 1940	.129	.190	....
Radio 1960	.600	.623	.527
Culture			
Barefoot M 1940	-.624	....	-.485
Barefoot M 1960	-.587	....	-.504
Nonwheat 1940	-.477	....	-.503
Nonwheat 1960	-.472	....	-.590
Running water 1960	.245	....	.187
Sleep in bed 1940	-.593	....	.518
Occupation			
Econ. act. F 1940	.347	....	.370
Econ. act. F 1960	.310	....	.429
White collar/EcAct M 1940	.750	....	.749
White collar/EcAct M 1960	.628	....	.611
White collar M 1960-1940	.372	....	....
White collar/EcAct F 1940	.671	....	.629
White collar/EcAct F 1960	.575	....	.426
White collar F 1960-1940	-.328	....	....
Clerical/EcAct M 1960	.695	....	.673
Clerical/EcAct F 1960	.671	....	.578

TABLE 33--Continued

	Male In-migrants as Percentage of Resident Male Population		
	1940	1950	1960
Professional/EcAct M 1960	.552	....	.568
Professional/EcAct F 1960	.260	....	.123
Public admin./EcAct M 1940	.668	....	....
Ag/EcAct M 1940	-.635	....	-.537
Ag/EcAct M 1960	-.595	....	-.568
Ag/EcAct M 1960-1940	-.158	....	....
Ag Labor/Ag Pop 1940	.198	....	.072
Ag Labor/Ag Pop 1960	.394	....	.416
Ejidos/Ag Pop 1940	-.005	....	-.173
Ag Prop/Ag Pop 1940	-.058	....	.138
Ag Prop/Ag Pop 1960	-.373	....	-.416
Ag Prop 1960-1940	-.260	....	....
Equip/Land 1950	.350	....	.172
Farm mechanized 1950	.813	....	.692
Income over 500 pesos 1960	.675	....	.736
Mfg/M 1940	.264	....	.206
Mfg/EcAct M 1960	.300	....	.240
Mfg/EcAct 1960-1940	.162	....	....
Mfg F/M+F in Mfg 1940	-.296	....	-.264
Mfg F/M+F in Mfg 1960	-.422	....	-.307
Mfg income over 500 pesos 1960	.706	....	.738
Pay/No. emp in fact. 1940	.400	....	.222
Pay/No. emp in fact. 1955	.259	....	.221
Employment of youth			
Employ M 1960	-.629	-.626	-.542
Employ F 1960	-.642	-.605	....
Literacy			
Literacy 10+ T 1940	.769	....	.718
Literacy 10+ T 1960	.690	....	.578

TABLE 33--Continued

	Male In-migrants as Percentage of Resident Male Population		
	1940	1950	1960
Literacy 40+ M 1940	.799	....	.781
Literacy 40+ F 1940	.757	....	.694
Literacy 40+ M 1960	.683	....	.623
Literacy 40+ F 1960	.666	....	.565
Literacy 30-39 MU 1960	.600	.512	....
Literacy 30-39 FU 1960	.672	.585	....
Literacy 20-24 MU-F 1960	-.600	-.528	....
Literacy 20-24 MR-F 1960	-.401	-.369	....
Literacy 10-14 M 1940-1930	.548	.520	....
Literacy 10-14 F 1940-1930	.508	.460	....
Literacy 10-14 M 1960-1940	-.450	-.414	....
Literacy 10-14 F 1960-1940	-.574	-.531	....
Enrollment 6-14 T 1937	.710	.710	....
Enrollment 6-14 T 1960	.489	.481	....
Adult levels of schooling			
No schooling			
Adult 25+ M 1950	-.715	....	-.719
Adult 25+ F 1950	-.691	....	-.633
Adult 30+ M 1960	-.684	....	-.642
Adult 30+ F 1960	-.691	....	-.573
7+ years of schooling			
Adult 25+ M 1950	.734	....	.722
Adult 25+ F 1950	.692	....	.583
Adult 30+ M 1960	.669	....	.647
Adult 30+ F 1960	.650	....	.544
10+ years of schooling			
Adult 25+ M 1950	.700	....	.701
Adult 25+ F 1950	.647	....	.540
Adult 30+ M 1960	.645	....	.640
Adult 30+ F 1960	.606	....	.510
Bac. and univ. education			
Adult 15+ Bac M 1940	.451	....	.253
Adult 15+ Bac F 1940	.278	....	.039
Adult 15+ Univ M 1940	.631	....	.503
Adult 15+ Univ F 1940	.708	....	.565

literacy rates.[1] Burnight and Whetten concluded that agricultural and industrial expansion were taking place simultaneously with substantial interstate migration of workers.[2]

That economic pull (and push) go a long way toward explaining migrant origins and destinations will hardly be denied by anyone, and has been observed often enough in Mexico by previous writers. But the particular linkages within these systems have rarely received comparable attention. In winding up this chapter, it is worth stressing once again the fact that the migration fields delineated by these movements are indicative of spatial structures of interpersonal communication. While people may hear of opportunities from several sources, repeated contact with family or friends living elsewhere is a powerful factor both in migration itself and in the spread of information and ideas by "feed-backs" to the home folk. It would take another very substantial research project to identify more precisely the relations between migration patterns in the development and operation of informal information fields, and the pace and spatial patterning of the diffusion of modernizing culture traits and behavior, or to distinguish income from attitude and information elements in such diffusion. It will be necessary, nevertheless, to consider migration patterns in the interpretation of diffusion of spatial schooling among children and the regression analyses of school enrollment rates that are focus of Chapters V and VI.

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[1] Raul Benitez Zenteno, Analisis Demográfico de México (Mexico: Instituto de Investigaciones Sociales Universidad Nacional, 1961), pp. 41-59.

[2] Nathan Whetten and Robert Burnight, "Internal Migration in Mexico," Estadistica, XVI (1958), 65-77.

CHAPTER V

LEVELS OF ADULT SCHOOLING AS INFLUENCES ON THE SCHOOLING OF YOUTH

Once primary schooling came to be seen as an important direct responsibility of government, the task of implementing educational policies remained. In glancing back over the period from 1930 to 1960 one is looking for consistencies in the ways in which primary schooling became part of the local scene. The interest here lies in the patterns of diffusion of primary schooling among youth in 1960 and in identifying the factors that encourage or restrain such diffusion. This is to treat primary education as an effect, not as a cause of social change. In other words, the concern is with the diffusion of education viewed as an "innovation" in local life.

In tracing the dispersion of primary schooling several aspects of Hägerstrand's model are adopted. The most effective way a new idea is introduced is through interpersonal communication or contact with a person who has adopted the new idea. The frequency of contact influences the speed at which an innovation is accepted; the highest rates of adoption are in areas where there have been preceding adoptions. Hägerstrand speaks of "density of adoption" or the increasing acceptance of an innovation where there have been earlier ones until a point of saturation has been reached. He speaks also of "resistances" of a population to an innovation, or the ease with which particular new ideas are accepted for any given intensity of tellings. Some new ideas may be adopted almost immediately, some only after repeated tellings, some not even then, and individuals may differ in their degrees of resistance to any particular change. All empirical observations reflect the operations of both "information fields" and "resistances"--i.e., conditions that foster or impede the adoption of a new idea. Hence this chapter, as well as the next one, is in part concerned with "resistances." However, the concentration here will be primarily on the "information fields" or fields of "tellings." Indeed, they have been anticipated in many ways, including in particular the networks that were implicit in the patterning of migration streams, just discussed at the end of Chapter IV.

One way in which variables describing education of adults fit into the model is as they indicate potential frequencies of direct exposure of youth to literate or educated persons who are prior "adopters." That is, areas where there are high proportions of literate adults (or adults with middle or upper levels of schooling) represent a high density of communication of youth with adopters of the innovation.

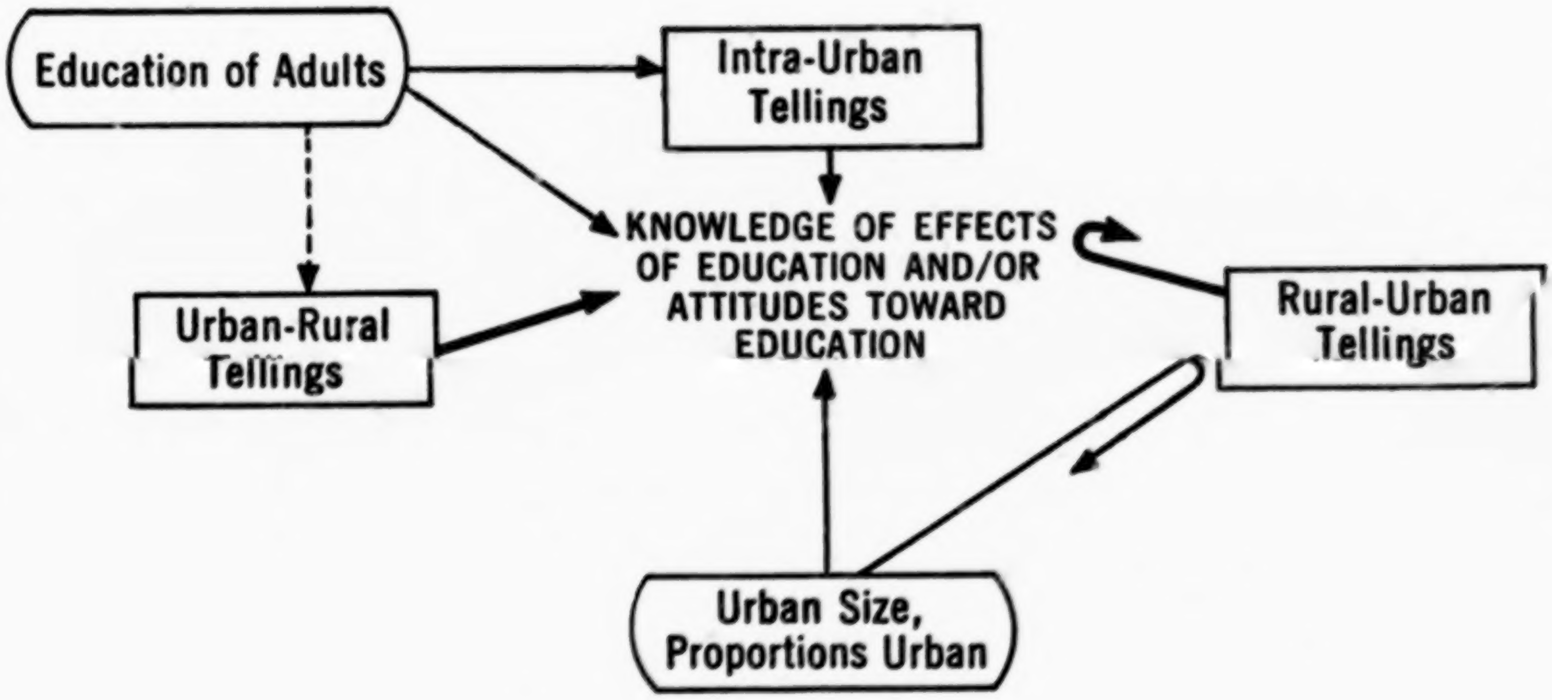
Urban centers, with their diversity of activities and circles of interpersonal contacts, are normally the nodes of modernization within and from which influences may reach out to break down rural traditions and draw less urban people into the wider national culture. However, urban centers vary in population, in the intensity of their participation in the national network, and in their dominance of surrounding hinterlands. There may also be rural as well as urban "parent localities" or "innovation centers" which appear again and again as early adopters of new ideas and as centers from which these spread. As Hägerstrand pointed out, the stability of these patterns does not mean that early adopters of various innovations will be the same individuals in exactly the same places. The stability of leadership is rather in adoption hierarchies of entire sub-populations.

Also, while there are geographic patterns with an upstream and downstream direction, another dimension to the flow of influence is on the scale of social-status and occupational-role differentiations in the clusterings of individuals exchanging information. In this treatment of communication patterns, the interest is in which adults (male or female) have the greatest influence on schooling of boys and girls. Do these patterns vary as between rural and urban areas? Have they changed over time?

In Figure 21 the schooling of youth is treated as an innovation being diffused. Central to the acceptance of schooling is knowledge of the effects of education, or the attitudes concerning education, that might encourage or restrain school enrollments and retention. The diffusion of knowledge about education in the model is dependent upon the communication system--the most effective channels being person to person tellings. The spatial distribution of educational attainment of adults is the proxy variable for "intensity of tellings" in this respect. That is, it is assumed that educated adults have more contact with new ideas, and a locality with a large proportion of educated adults would have a more rapid interchange of information relevant to decisions about schooling. The literacy, enrollment, and retention rates of children are treated as the innovation or dependent variable. In Figure 21 the indicator variables available for empirical analysis are in the rounded boxes; the concepts or hypothetical variables are in the square boxes.

Within an urban setting there is a high physical density and a high over-all frequency of "tellings," but urban society may be segmentalized. The critical factor for social change is how often tellings link diverse subgroups of the population. Recent studies have disclosed groups of urban dwellers living in a traditional rural way of life, barely touched by their surroundings. In spite of increased physical density, social distances may become greater

Fig. 21.--Interpersonal communication networks.


Education of Adults
Intra-Urban Tellings
KNOWLEDGE OF EFFECTS OF EDUCATION AND/OR ATTITUDES TOWARD EDUCATION
Urban-Rural Tellings
Rural-Urban Tellings
Urban Size, Proportions Urban

among groups within a city. The in-migrants who flock to cities may swell the numbers engaged in marginal economic activities. At the same time, cities attract those in search of higher education and higher levels of jobs. Urban areas contain not only disproportionate numbers of the better educated but also increasingly large numbers of marginal individuals. To what extent intra-urban communication will reach those groups, how far disparate communication networks are maintained side by side, is basic for determining the pace and patterns of modernization both within cities and out into the hinterlands. Intra-urban tellings may be limited and highly differentiated, or they may be more diffuse and multiplicative in their effects. At the traditional, rural extreme the rural-to-urban communication may dominate the life of the small city that is a meeting place for the traditional rural people. The arrow reversing back depicts the power of traditional culture in the life of such communities, which may reinforce traditional culture instead of opening channels to modern and more national sorts of thoughts and behavior.

Active urban to rural tellings will typically lead toward increased diffusion of knowledge about education, given that the urban areas are also the initial lead areas--the parent localities from which new ideas arise or through which they are carried to subordinate or secondary rural diffusion nodes. The dominant role of primary cities such as the Federal District, Monterrey, and Guadalajara has been discussed. With the breakdown of the hacienda system and increased mobility of the population, the small and middle-sized regional cities have taken on changing roles as intermediaries in the communication networks. They are not only distributive centers for goods and services but also localities through which migrants may spend some time as they leave the farms in search of greater opportunities in the larger cities or in the thriving agricultural centers in the North and Northwest.

The economies of these regional cities are tied to the agricultural production of the surrounding country in diverse ways.[1]

The urbanization variables that distinguish city size help to distinguish the primary city as a diffusion node. Indexes based on the 2,500+ base pick up the smaller cities as well, including those that are most locally oriented. When communication links are strong between cities and their hinterlands, with high "social densities" rather than segmentalization of communications, there will also be high correlations between urban and rural education variables applying to the same general localities. Low correlations in this respect indicate a societal geography in which the "hinterland" concept of the West has little application.

Analysis of Effects of Adult Educational Attainments

Geographic patterns in the influence of adult schooling on youth are measured in the following ways:

1. Educational characteristics of youth in earlier and in later years are compared: 1930 with 1940, with 1960. Such comparisons can tell us how great the overall changes have been and how stable over time are geographic rankings in these respects. It is only indirectly that they measure adult educational influences, however. Since many who were young in 1930 may have migrated to other areas, looking at the locality data for youth in 1960 and 1930 can tell us only whether those qualities of the population in the particular areas are the same or have changed.

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[1] Stavenhagen argues that the capital accumulated in these cities while flowing from an agricultural base is redirected toward the large centers of development, but he nevertheless perceives the groups of people offering the goods and services in these regional cities as having an influential role in the dynamics of change, op. cit., pp. 16-17.

2. Comparing adults and children in 1960 does offer direct evidence concerning effects of educational attainment of the parental generation upon schooling among youth. If there is not much migration, then these relationships will resemble those obtained in procedure 1.

3. The adult population of 1930 may be compared with the youth of 1960. If the extent and educational selectivity of migration is not too great this provides evidence concerning a three-generation sequence in the transmission of educational attitudes and attainment.

Literacy Rates in Mexico and Iran

In analyzing the levels of literacy, school enrollment, and school retention of youth in Mexico, some comparisons with the findings of the Fattahipour study of Iran will be made. This is interesting because, not merely despite, the fact that the settings are quite different. According to the 1956 census in Iran, only 15 per cent of the population were literate: in urban areas one-third of the population over 10 years old, in rural areas only 6 per cent.[1] In contrast, in Mexico, in 1960, three-fifths of the population over age 6 were literate; rural-urban differences were also marked but less so than in Iran; 76 per cent for urban and 48 per cent for rural populations. Given these widely divergent starting points, the comparison is between countries at two distinct stages of development. There are other critical contrasts--notably between a traditional Islamic culture on the one hand an an amalgam of indigenous Indian cultures and a colonial Spanish-Catholic heritage. In these very different settings, are there nevertheless similar patterns of influence of adults on children, in the role of females, in the function of cities in relation to their surroundings? Such comparisons raise fundamental questions concerning the spectra of development processes and their interpretations.

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[1] Fattahipour, op. cit., pp. 82 and 84.

In both countries males are more literate than females, and in Iran the gap is extreme. (It is impossible to tell to what extent this is due to the role of women in a Moslem country and how far this disparity is a more universal feature of an earlier stage in development.) In the Mexico of 1960 literacy was about the same for young boys and girls and differed in equal degree among the states. Although urban literacy was above that in rural areas for youth in Mexico as well as in Iran, the rural lag in Iran was much more dramatic (Table 34). In both Mexico and Iran the literacy of younger age cohorts in rural areas lagged behind that of the older generation in urban areas. This was strikingly true for Iranian males but less marked for females because in Iran the older urban women were still so low in literacy. Among the states of Mexico, the median literacy rate of rural males age 10-14 was 70 per cent as compared with a rate of about 80 per cent for urban males 40-49 years old.

In Iran, urban females received more education than the rural males up to age 35, but at older ages rural males were higher than urban females. In Mexico, on the other hand, even females 40-49 years old in cities had higher literacy rates than rural males in the same age category and they matched the literacy of rural male children of 10-14 years of age.

Literacy in Iran increased most rapidly between older and younger generations among females, and it increased more between generations in urban than in rural areas. In Mexico, where literacy was much more widespread among adults, there had been a similar increase between generations, again especially among females, but it was the rural females who showed the greatest gains. The extent to which literacy was approaching universality in Mexican cities and the

TABLE 34

COMPARISONS OF LITERACY RATES BY AGE: MEXICO AND IRAN[a]

	Percentages Literate			
	Mexico, 1960		Iran, 1956	
	M	F	M	F
Federal District (urban)			Teheran (City)	
Age 60+	85	68	..	..
50-59	89	73	..	..
55-64	..	..	41	..
40-49	92	79	..	..
45-54	..	..	..	..
30-39	92	82	..	..
25-29	94	85	..	..
25-24	..	..	52	32
20-24	94	85	..	..
15-19	95	89	..	..
10-14	95	91	79	72
All Urban				
55-64	..	..	27	5
50-59	78	63	..	..
40-49	83	71	..	..
45-54	..	..	32	6
30-39	85	75	..	..
25-29	86	78	..	..
25-34	..	..	44	18
20-24	88	81	45	21
15-19	88	85	58	32
10-14	86	84	69	48

TABLE 34—*Continued*

	Percentages Literate			
	Mexico, 1960		Iran, 1956	
	M	F	M	F
	All Rural			
55-64	..	..	6	.1
50-59	47	29	..	..
40-49	55	37	..	..
45-54	..	..	7	.2
30-39	60	44	..	..
25-29	62	49	..	..
25-34	..	..	10	.7
20-24	64	54	12	1
15-19	64	60	16	2
10-14	70	70	20	3

[a] Source for Iran, Fattahipour, *op. cit.*, p. 84 and p. 90.

slowing down of its diffusion both there and among rural males is manifest; this is undoubtedly in some degree a reflection of selective rural-urban migration.

Some quite general sequences in the diffusion of literacy through a population are illustrated in the comparisons between Mexico and Iran in Table 35. The youngest males in Iran in 1956 were still somewhat behind the older females of Mexico in 1940, and both these distributions were still positively skewed. Though third-moment measures of skewness were not computed for Iran, the data indicate positive skewness for the young males and, most emphatically, for the young females. Skewness in distributions for the older generation would be more evident if urban areas or Tehran, in particular, were set apart.

The shifting signs and magnitude of the measures of skewness in the raw figures for Mexican states as moving from both the oldest persons and children of 1940 to the children of 1960 dramatize the patterns of change. In 1940 there were only a few states with literacy rates in the upper ranges while the modal cluster of states was below the 50 per cent mark, giving a positive skewness. However, by 1960, there were more cases in the upper ranges, especially among youth, and the exceptions were "low" states with rates around 50 per cent (as shown by the negative skewness). The distribution of literacy among the older generation had also shifted by 1960, with fewer cases in the lower percentages, especially among males.

Literacy Correlations: Mexico and Iran

Associations in literacy rates for various age, sex, and residence groups among the states of Mexico and among the districts of Iran are summarized in Table 36. The most striking impression from the Mexican data is of

TABLE 35

DISTRIBUTIONS OF LITERACY RATES: MEXICO AND IRAN COMPARED[a]

	Percentages Literate				
	Age 10-14		Age 40+		Age 55-64
	M	F	M	F	M
Mexico, 1960					
Decile 1	90	91	77	72	..
Median	75	76	63	53	..
Decile 9	50	50	44	24	..
Skew	-.499	-.526	-.271	-.081	..
Mexico, 1940					
Decile 1	78	79	65	54	..
Median	51	54	48	38	..
Decile 9	27	21	28	16	..
Skew	.166	.042	-.001	.146	..
Iran, Districts, 1956					
Decile 1	49	22	..	..	15
Median	30	9	..	..	10
Decile 9	16	2	..	..	5

---

[a] Source for Iran, Fattahipour, op. cit., p. 90.

TABLE 36

CORRELATIONS AMONG LITERACY RATES IN STATES OF MEXICO AND DISTRICTS OF IRAN[a]

	Iran		Mexico	
	M	F	M	F
Rural-urban comparisons				
Age 40-49	...	...	.463	.864
25-34	.23	.52	....	....
10-14	.37	.54	.565	.570
	Urban	Rural	Urban	Rural
Males: age comparisons				
55-64/10-14	.30	...	....	....
40-49/10-14	...	...	.923	.931
25-34/10-14	.58	.88	....	....
Females: age comparisons				
40-49/10-14	...	...	.911	.859
25-34/10-14	.87	.84	....	....
Sex comparisons				
Age 40-49	...	...	.891	.859
25-34	.56	.77	....	....
10-14	.60	.74	.987	.960
Age-Sex crosses				
M 55-64/F 10-14	.36	...	....	....
M 40-49/F 10-14	...	...	.913	.906
M 25-39/F 10-14	.52	.40	....	....
F 40-49/M 10-14	...	...	.915	.820
F 25-34/M 10-14	.48	.74	....	....

---

[a] Source for Iran, Fattahipour, op. cit., p. 131.

very high correlations across sex and age within urban and within rural residence categories. All of the coefficients except those involving urban-rural comparisons exceed .800, explaining two-thirds or more of the variance in the designated younger age cohorts. The only Iran correlations at this level were between young adults and children for rural males and for both urban and rural females. There are some distinctions among the Mexican figures nevertheless, even when rural-urban comparisons are ignored. In particular, there is a definite jump in the sex correlations from the older age (40-49) to the children. The coefficients for the former are .891 urban and .859 rural while those for the children come close to unity, at .987 and .960 respectively. In Iran, the sex correlations were not so high, and those within the rural category (.77 and .74) exceeded those within the urban (.56 and .60) for each age. Even more striking are the sharp contrasts in the degree of correlation across ages in the Iranian as against the Mexican data for urban males and in all the age-sex cross-combinations. Some of the Mexican comparisons are displayed in more detail in scattergrams (Figures 22 to 26).

The urban-rural correlations for literacy (within each sex and age category) serve to indicate how closely adjacent urban and rural communities are linked with each other and thereby differentiated from other areas. Excepting the correlations for older females, the degrees of rural-urban association in literacy rates are generally modest; those for Mexican males and younger females nevertheless approximate the Iranian relationships for females. These findings suggest significant but nevertheless weak local urban-rural communications, along with active networks linking urban centers of widely scattered areas. This should come as no surprise. The surprising figure is rather the high Mexican correlation between urban and rural literacy

Fig. 22.--Scattergram of percentages of literate 10-14 year olds, males by females, 1960.

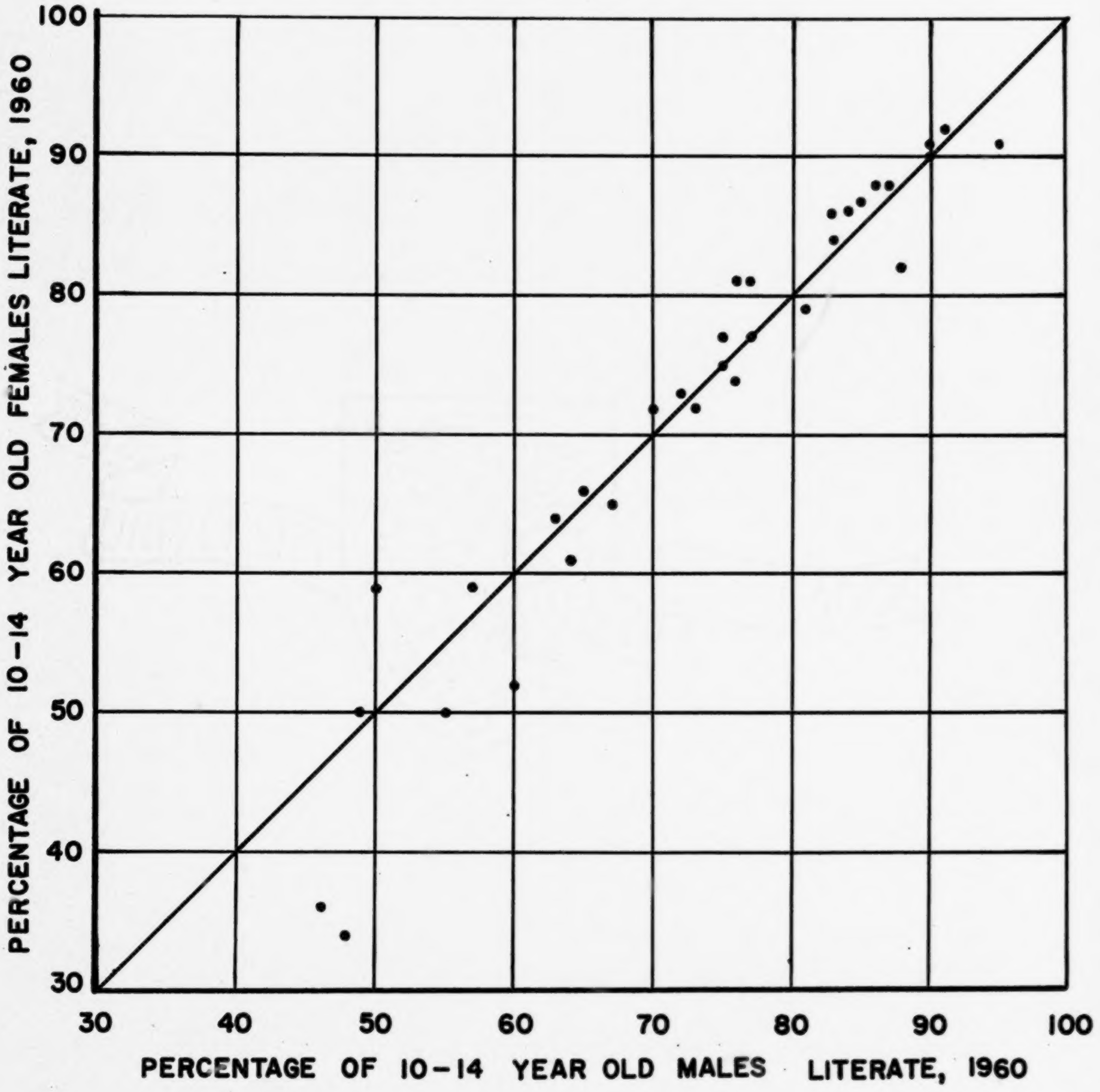

PERCENTAGE OF 10-14 YEAR OLD FEMALES LITERATE, 1960
100
90
80
70
60
50
40
30
30
40
50
60
70
80
90
100
PERCENTAGE OF 10-14 YEAR OLD MALES LITERATE, 1960

Fig. 23.--Scattergram of percentages of rural literate 10-14 year olds, males by females, 1960.

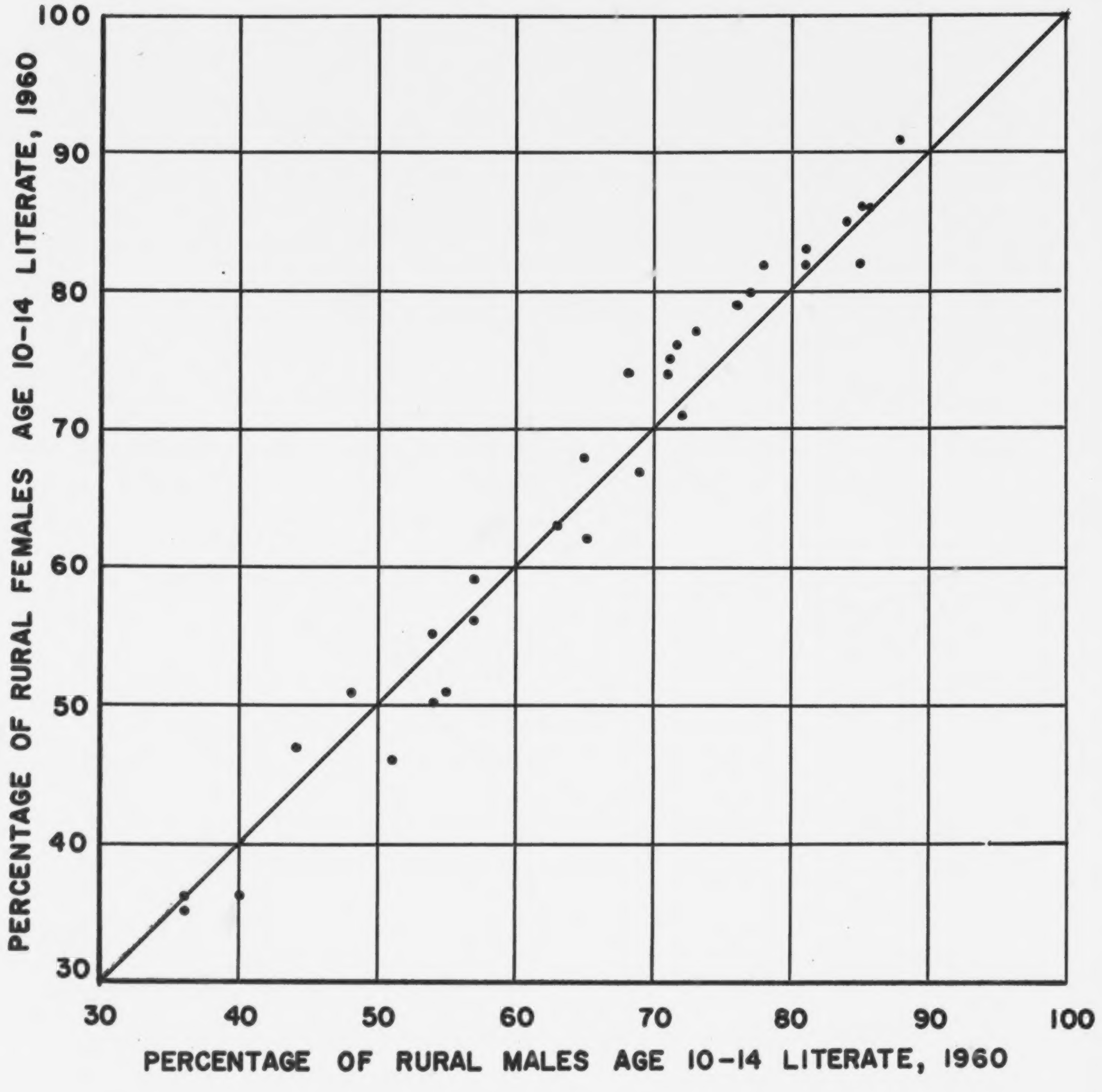

PERCENTAGE OF RURAL FEMALES AGE 10-14 LITERATE, 1960
PERCENTAGE OF RURAL MALES AGE 10-14 LITERATE, 1960
30
40
50
60
70
80
90
100

Fig. 24.--Scattergram of percentages of literate males 40+, 1940 by 1960.

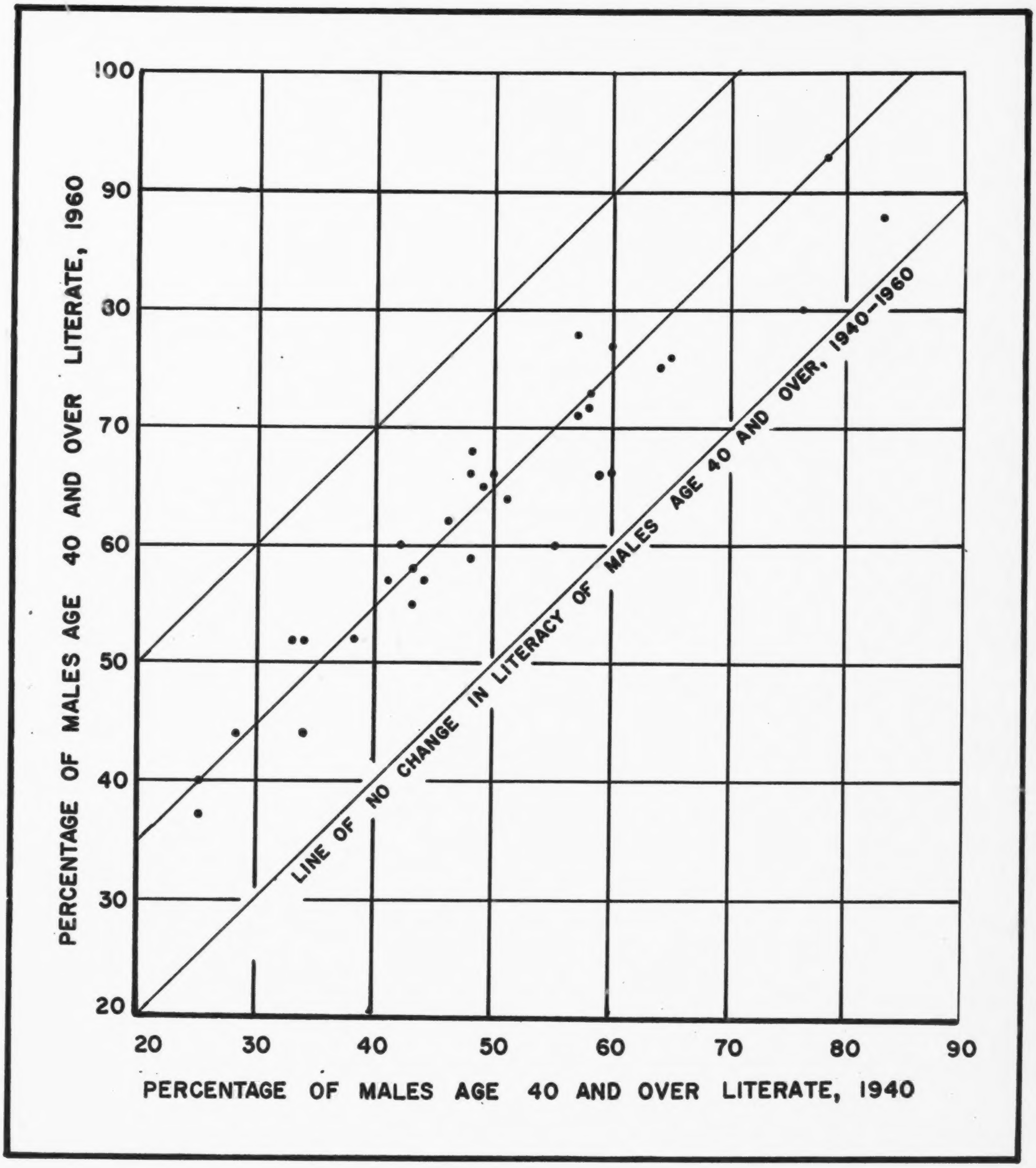

100
90
80
70
60
50
40
30
20
PERCENTAGE OF MALES AGE 40 AND OVER LITERATE, 1960
20
30
40
50
60
70
80
90
PERCENTAGE OF MALES AGE 40 AND OVER LITERATE, 1940
LINE OF NO CHANGE IN LITERACY OF MALES AGE 40 AND OVER, 1940-1960

Fig. 25.--Scattergram of percentages of literate males 40+ years by 10-14 years, 1960.

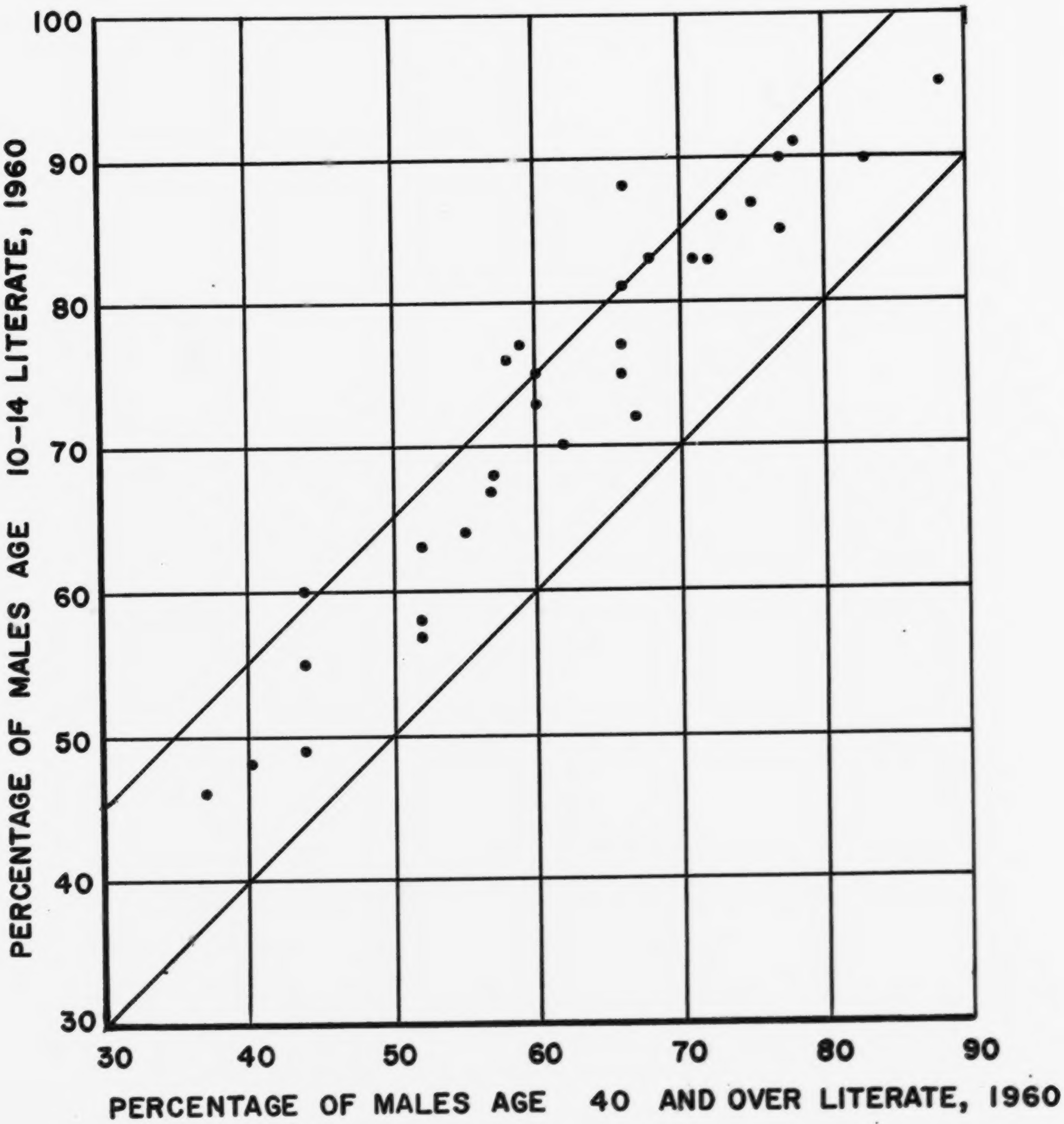
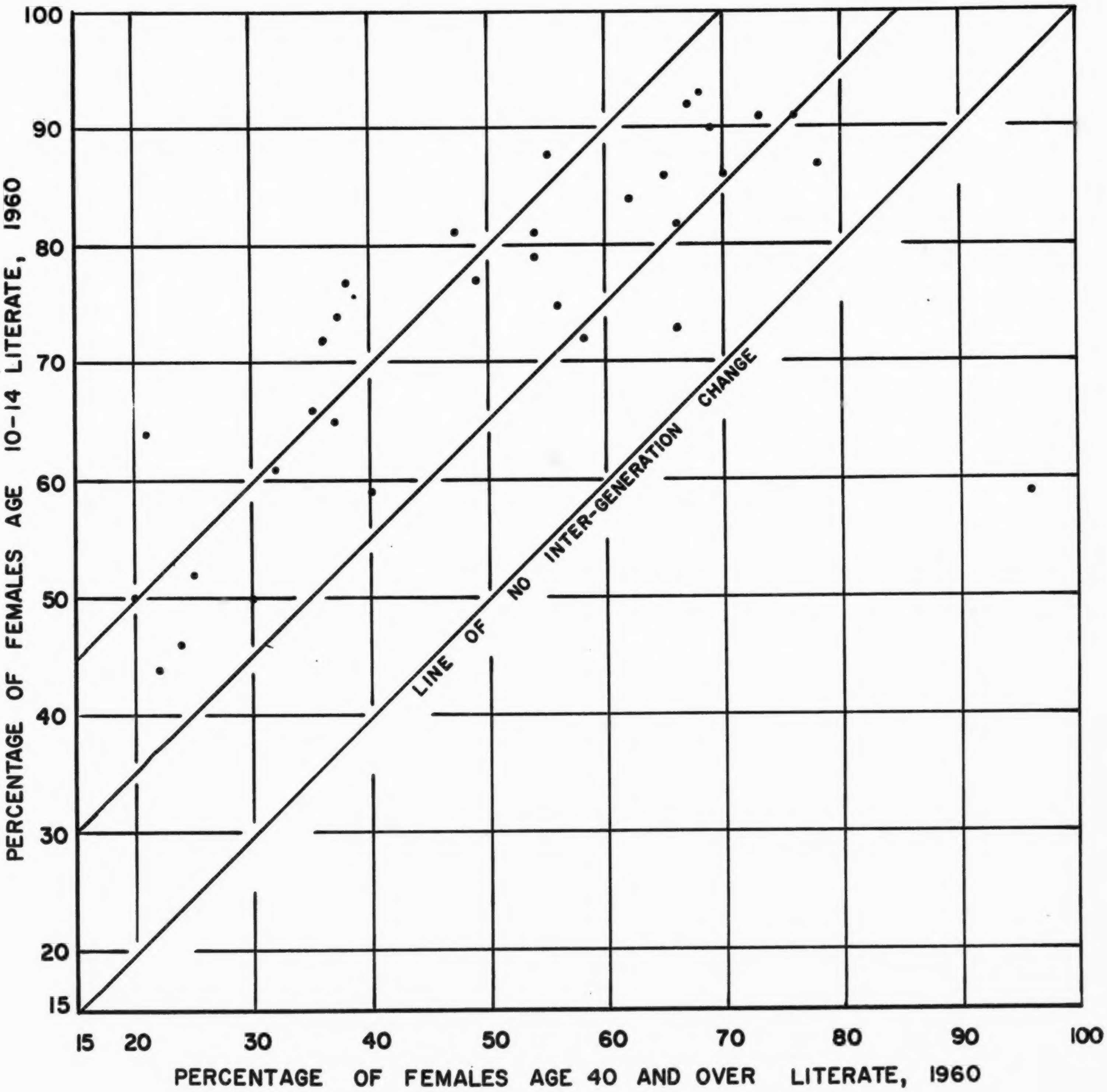

100
90
80
70
60
50
40
30
30
40
50
60
70
80
90
PERCENTAGE OF MALES AGE 10-14 LITERATE, 1960
PERCENTAGE OF MALES AGE 40 AND OVER LITERATE, 1960

Fig. 26.--Scattergram of percentages of literate females 40+ years by 10-14 years, 1960.


PERCENTAGE OF FEMALES AGE 10-14 LITERATE, 1960
100
90
80
70
60
50
40
30
20
15
15
20
30
40
50
60
70
80
90
100
PERCENTAGE OF FEMALES AGE 40 AND OVER LITERATE, 1960
LINE OF NO INTER-GENERATION CHANGE

rates for women aged 40-49. Putting this the opposite way, it points to some of the effects of migrations, which can easily confound urban-rural correlations even when the migrants themselves carry "tellings" back home and draw their kin to the cities. The migrant and dissociated male dwellers in the cities of Iran may be a more extreme example of segmentalism in urban life than what we observe in Mexico, but the evidence is clear enough there as well.

Schooling of Adults and Child Literacy

Given the generally high correlations between literacy of adults and of children in Mexico, close correlations between adult schooling and child literacy as well might be anticipated. This is by no means a foregone conclusion, however. It would be quite possible to find high correlations only where minimal attainment levels are involved, with schooling beyond mere literacy or primary stage being a distinct attribute in which only limited and distinctive minorities participate. Which of these patterns prevail is an important development question to which a partial answer is given in Table 37.

In those areas having large proportions of unschooled parents, there were larger gaps between urban and rural children in literacy. If men were unschooled, young rural males and females were less likely to be literate; whether women were unschooled had slightly less effect. The opposite tendency prevailed for urban youth literacy; that is, the relationship was stronger with unschooled females than with unschooled male adults.

There are moderately high relationships between literacy of youth and porportions of adults with at least some post-primary schooling; these associations are higher for the urban than the rural child-literacy rates regardless of sex.

TABLE 37

CORRELATIONS BETWEEN LITERACY OF YOUTH AND LEVELS OF ADULT SCHOOLING, 1960

	Literacy of 10-14 Year Olds			
	Urban		Rural	
	Males	Females	Males	Females
Levels of adult schooling Age 30+				
No schooling				
Males	-.725	-.706	-.918	-.903
Females	-.816	-.825	-.835	-.846
7+ years of school				
Males	.759	.735	.670	.676
Females	.769	.757	.671	.699
10+ years of school				
Males	.739	.716	.630	.638
Females	.732	.722	.635	.653

Matrix C, Factor 1 (Table 38) sums up these and related associations; it has loadings of .800 or more on the literacy of youth (both male and female) from 1930 through 1960, and on middle and high levels of adult schooling. When the factor scores are mapped (Figure 27), a clear spatial pattern emerges, emphasizing the adjacency of developed areas in the North, the pocket of progress centered on Yucatan, and contiguity of the backward areas of the South. On this factor again the developed Federal District is surrounded

TABLE 38

FACTORS WITH HIGH LOADINGS ON LITERACY AND SCHOOLING OF YOUTH

Variable Number	Factor Matrix	C	A	B	D	D	D	C	B	A
	Factor Number	1	11	4	5	9	13	3	9	5
Population distribution and change										
2	Density 1960	....	-.176	-.063	....	....	....	....	.068	-.035
4	Urban 1940	....	-.037	-.081	.177	-.057	.004	....	.160	.073
8	Capital/urban 1940	....	-.029	.027	....	....	....	....	.023	-.085
10	Capital size 1940	....	.130	-.040	....	....	....	....	-.010	-.152
12	Pop. 50,000+ 1960	.615	....	-.179	.157	-.131	-.057	-.024	-.103	....
13	Urban 1960/1930	....	....	-.074	.299	.054	-.002	....	-.059	....
14	Urban 1960-1950/1960-1940	....	-.051	-.030	-.484	-.038	-.186	....	-.001	.155
15	In-migrant 1940	....	-.079	-.376	.218	.017	-.056	....	-.122	.167
Transportation										
18	RR/pop. 1940	....	-.033	....	....	....	....	....	-.025	-.000
23	Roads/pop.^{B} 1940	....	....	....	....	....	....	....	-.102	....
26	Roads/area^{B} 1940	....	....	-.184	....	....	....	....	-.092	....
27	Roads/area 1960	....	....	-.127	....	....	....	....	.064	....
28	Roads paved 1960	....	-.155	....	....	....	....	....	.055	.028
29	Bicycles/pop. 1940	....	....	.212	.090	.015	.070	....	....	....
30	Bicycles/pop. 1960	....	-.039	....	....	....	....	....	.170	-.104
31	Bicycles/pop. 1960-1940	....	....	....	.057	-.086	-.084	....	....	....
32	Autos/pop. 1940	....	.050	-.065	-.154	-.122	-.031	....	-.115	.241
34	Autos/pop. 1960/1939	....	....	....	.217	.136	-.032	....	....	....
35	Autos/pop. 1960-1940	....	....	....	-.123	.215	.272	....	....	....

Utilities and communication										
36	Elect/capita 1940	....	....	-.085	-.203	.041	.049	....	-.174	....
37	Elect/capita 1960	....	.050	-.000	....	....	....	....	-.146	.269
38	Elect/capita 1960-1940	....	....	....	-.064	-.143	.068	....	....	....
39	Movies/pop. 1940	....	.151	.027	.135	.048	.143	....	-.096	.107
40	Movies/pop. 1960	....	-.055	-.228	....	....	....	....	.148	-.117
41	Movies/pop. 1960-1940	....	....	....	-.019	.062	-.014	....	....	....
42	Library use 1940	....	.122	-.053	-.049	.201	.149	....	-.060	.315
43	Running water 1960	....	....	-.400	....	....	....	....	.016	....
44	Radio 1960	....	-.140	-.293	.065	-.008	.043	....	-.014	.072
Marriage and fertility rates										
45	Single F 20-24 1960	.167	-.120	-.370	....	....	....	.143	-.026	.121
47	F under 5 yrs./F 1960	.084	-.087	-.136	....	....	....	.050	.061	.010
Labor force participation										
58	EcAct F 10+ 1940	.311	.081	-.214	-.059	.442	.295	.097	.054	-.051
59	EcAct F 12+ 1960	.135	.119	-.146	.001	.522	.194	.378	-.512	.369
60	EcAct F 1960-1940	....	....	.022	.054	.295	-.053	....	-.826	....
61	Devel. index 1950	....	....	-.025	....	....	....	....	.154	....
Employment of youth										
62	Employ 8-11 M 1960	-.701	.590	.121	.069	.088	.361	-.321	.054	-.204
63	Employ 8-11 F 1960	-.604	.487	.156	.012	.113	.411	-.309	-.162	-.194

TABLE 38--Continued

Variable Number	Factor Matrix	C	A	B	D	D	D	C	B	A
	Factor Number	1	11	4	5	9	13	3	9	5
White collar and professional workers										
64	Collar/EcAct M 1940	....	-.028	-.021	-.113	-.016	.034	....	.021	.008
66	Collar/EcAct M 1960-1940	....	-.075	-.097	.121	.065	.157	....	.041	-.162
67	Collar/EcAct F 1940	....	....	....	-.179	-.124	-.089	....	....	....
69	Collar/EcAct F 1960-1940	....	....	-.250	.251	.208	.193	....	.123	....
70	Clerical/EcAct T 1960	....	-.023	-.058	-.116	.017	.127	....	-.050	-.056
74	Prof/EcAct M 1960	....	-.177	-.015	....	....	....	....	-.029	.017
75	Prof/EcAct F 1960	....	....	-.045	....	....	....	....	.309	....
Public administration										
77	P.A./EcAct M 1940	....	-.007	.091	....	....	....	....	-.012	.070
Agriculture										
79	Ag/EcAct M 1940	....	.077	.092	.084	.090	.039	....	-.030	-.110
80	Ag/EcAct M 1960	....	.095	.042	-.013	.019	-.076	....	.042	-.051
81	Ag/EcAct M 1960-1940	....	.050	-.049	-.267	-.171	-.221	....	.159	.007
82	Ejidos/Ag Pop 1940	....	-.177	.025	-.064	-.173	.003	....	.030	.007
83	Ag Labor/Ag M 1940	....	.085	-.507	.191	.230	.075	....	-.014	-.118
84	Ag Labor/Ag M 1960	....	-.147	-.328	-.018	.017	-.080	....	-.013	.097
85	Ag Prop/Ag M 1940	....	-.084	.095	-.156	-.070	-.040	....	-.150	.193
86	Ag Prop/Ag M 1960	....	.085	.336	.030	-.008	.039	....	.007	-.083
87	Ag Prop/Ag M 1960-1940	....	....	.224	.099	-.044	.114	....	.078	....

89	Farm mechanized 1950	....	.045	-.414	.093	-.048	.133	....	-.038	.090
91	Ag inc. over $500 1960	.689	-.016	-.219	-.133	-.057	.040	.128	-.011	.080
94	Returns Glick 1950-1930	....	....	-.315	.197	.054	.016	....	-.059	....
Manufacturing										
98	Mfg/EcAct M 1960-1940	....	....	....	.086	-.043	-.075	....	....	....
103	Mfg inc. over $500 1960	.725	-.133	-.136	....	....	....	.092	-.149	.075
105	Pay/Emp Fact 1930	....	....	.119	....	....	....	....	-.164	....
107	Pay/Emp Fact 1950	....	-.031	-.122	....	....	....	....	-.179	.266
109	Pay/Emp Fact 1955/1940	....	.242	....	-.048	.117	.060	....	....	.632
111	Mining/EcAct M 1940	....	....	-.192	....	....	....	....	-.139	....
Culture traits										
125	Barefoot M 1940	....	-.005	....	.121	.076	.043	....	....	-.121
127	Barefoot M 1960	....	....	.234	....	....	....	....	-.158	....
133	Barefoot M 1940-1950	....	....	....	.058	.116	-.030	....	....	....
134	Barefoot M 1950-1960	....	....	....	-.079	-.129	.121	....	....	....
135	Barefoot M 1940-1960	....	-.010	.425	-.063	.009	.039	....	-.196	-.089
128	Barefoot F 1940	....	-.004	....	-.061	.116	-.007	....	....	-.084
136	Barefoot F 1940-1950	....	....	....	.134	.270	-.119	....	....	....
137	Barefoot F 1950-1960	....	....	....	-.048	-.104	.058	....	....	....
138	Barefoot F 1940-1960	....	....	.458	.067	.131	-.053	....	-.252	....
123	Barefoot urban 1960	....	....	.131	.299	.009	.067	....	-.101	....
131	Barefoot M/F 1940	....	-.011	.052	....	....	....	....	.011	-.128
132	Barefoot M/F 1960	....	....	-.342	....	....	....	....	.311	....
113	Non-Catholic T 1940	....	-.047	.169	....	....	....	....	-.051	-.181
114	Non-Catholic T 1960	....	....	.065	....	....	....	....	-.116	....

TABLE 38—Continued

Variable Number	Factor Matrix	C	A	B	D	D	D	C	B	A
	Factor Number	1	11	4	5	9	13	3	9	5
43	Running water 1960	....	-.090	-.400	....	....	....	....	.016	.029
115	Sleep on floor 1940	....	....	-.345	....	....	....	....	-.337	....
116	Sleep on bed 1940	....	-.062	-.520	....	....	....	....	.041	.147
117	Nonwheat T 1940	....	.017	-.007	.121	-.076	-.162	....	-.091	-.128
119	Nonwheat T 1960	....	....	-.092	....	....	....	.....	-.006	....
120	Nonwheat 1940-1950	....	....	....	-.242	-.039	.022	....	....	....
121	Nonwheat 1950-1960	....	....	....	.003	-.016	.135	....	....	....
122	Nonwheat 1940-1960	....	.167	-.061	-.165	-.035	.086	....	-.289	-.006
Education Literacy										
140	Literacy 10+ T 1940	.912	....	....	-.003	-.042	-.056	.172	....	....
141	Literacy 10+ T 1960	.888	....	....	-.002	-.158	-.089	.143	....	....
153	Literacy 6+0 Sch M 1940	-.400	-.307	....	....	....	....	-.071	....	-.326
155	Literacy 10-14 M 1930	.884	-.384	.070	....	....	....	.298	.043	.230
156	Literacy 10-14 F 1930	.833	....	-.047	....	....	....	.273	.064	....
157	Literacy 10-14 M 1940	.942	....	-.024	.012	-.054	-.024	.158	-.018	....
158	Literacy 10-14 F 1940	.913	....	-.107	-.041	-.010	.035	.102	.007	....
159	Literacy 10-14 M 1960	.891	....	-.166	....	....	....	.236	.060	....
160	Literacy 10-14 F 1960	.875	....	-.203	....	....	....	.209	.055	....
161	Literacy 10-14 M 1940-1930	.680	.135	....	-.020	-.128	.536	-.203	....	-.109
162	Literacy 10-14 F 1940-1930	.667	....	....	-.171	-.052	.502	-.316	....	....
163	Literacy 10-14 M 1960-1940	-.707	-.103	....	.095	.017	-.100	.047	....	-.077
164	Literacy 10-14 F 1960-1940	-.739	....	....	.144	-.134	-.281	.129	....	....
165	Lit. 6+ 1960-50/1960-40	-.307	....	....	.160	-.091	.580	-.146	....	....

	Literacy by age									
	Urban males 1960									
168	40-49	.727	.120	....	....	....	....	-.279	....	-.120
170	25-29	.630	.157	....	....	....	....	-.210	....	-.265
	Rural females 1960									
192	40-49	.741	-.229	....	....	....	....	.266	....	.189
	Age differences in literacy, 1960									
	Urban males									
198	(15-19)-(40-49)	....	-.114	....	.351	.546	.054	....	....	.082
199	(40-49)-(60+)	....	....	....	.176	-.824	.140	....	....	....
	Urban females									
200	(15-19)-(40-49)	....	.037	....	.377	.134	.128	....	....	-.090
201	(40-49)-(60+)	....	....	....	-.091	-.530	-.005	....	....	....
	Rural males									
202	(15-19)-(40-49)	....	-.040	....	.079	.238	.256	....	....	.067
203	(40-49)-(60+)	....	....	....	.088	-.591	-.002	....	....	....
	Rural females									
204	(15-19)-(40-49)	....	-.437	....	.256	.057	-.171	....	....	-.083
205	(40-49)-(60+)	....	....	....	-.017	-.361	-.039	....	....	....
	Sex differences in literacy, 1960									
208	40-49 MU-F	-.532	.107	....	.157	-.087	.057	-.097	....	-.058
218	40-49 MR-F	-.391	-.175	....	.129	-.040	-.184	-.055	....	-.039
221	20-24 MR-F	....	.114	....	....	....	....	....	....	.021
	Adult levels of schooling									
228	Adult 30+0 Sch M 1960	-.944	.259	....	....	....	....	-.192	....	-.178
258	Adult 30+0 Sch M 1950-60	-.435	....	....	-.209	-.019	.498	-.248	....	....
236	Adult 25+7+Sch M 1950	.901	-.014	....	....	....	....	.056	....	.083
238	Adult 30+7+Sch M 1960	.894	.040	....	-.110	.097	.144	....	....	.032
239	Adult 30+7+Sch F 1960	.846	....	....	-.124	.052	.059	.051	....	....
242	Adult 30+10+Sch M 1960	.856	.049	....	....	....	....	-.014	....	.026

TABLE 38—Continued

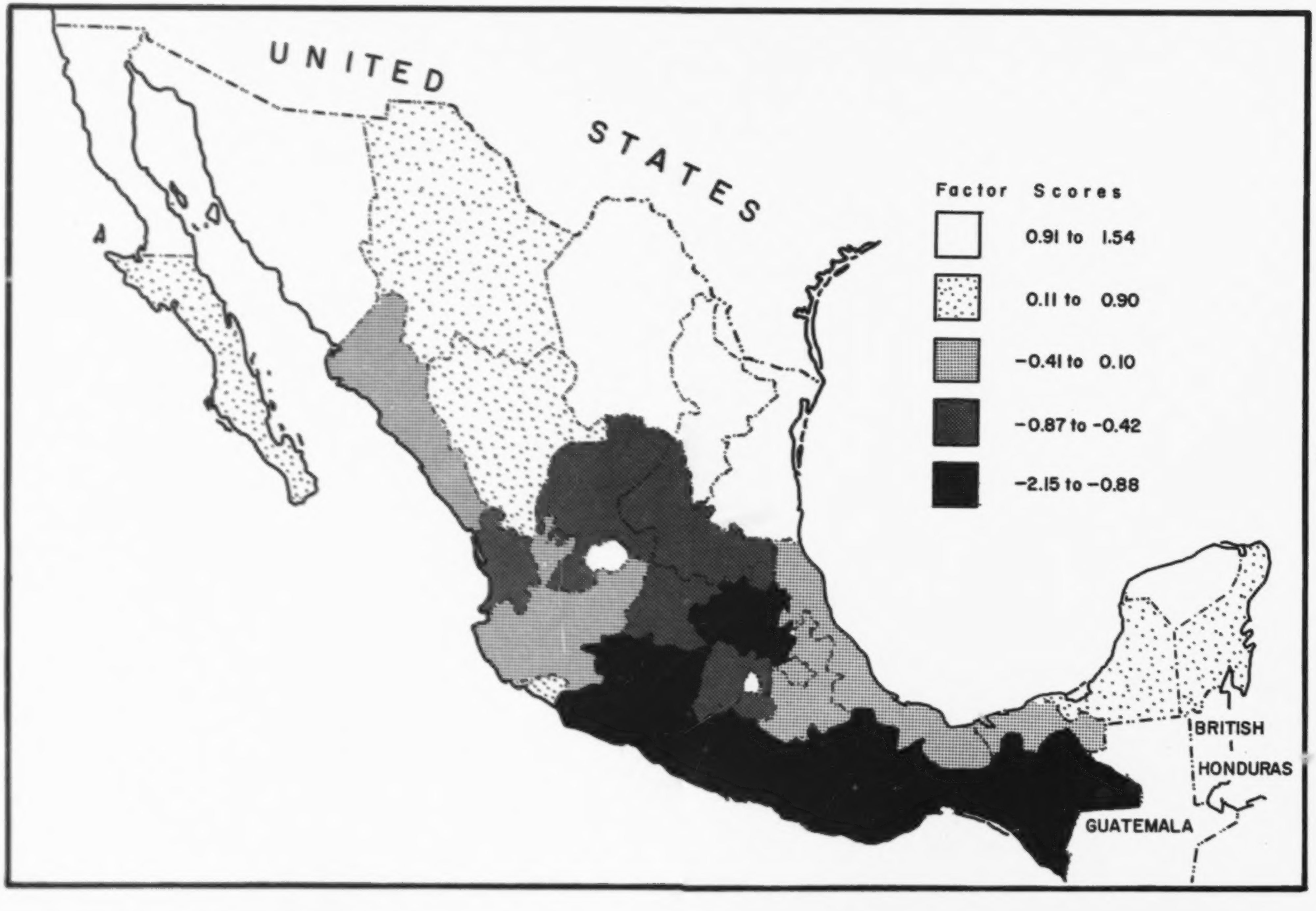
Variable Number	Factor Matrix	C	A	B	D	D	D	C	B	A
	Factor Number	1	11	4	5	9	13	3	9	5
Enrollment										
265	Enrol 6-14 T 1937	.630	-.180	-.194	-.057	.172	.024	.153	-.207	.090
266	Enrol 6-14 T 1960	.626	....	.057	-.068	.220	-.131	.099	-.032	....
267	Enrol 6-10 M 1930	.704	-.476	.131	.111	.175	-.417	.368	.060	.243
273	Enrol 6-14 urban 1960	....	-.138	.083	-.873	.142	-.023	....	-.087	-.030
274	Enrol 6-14 rural 1960	....	-.615	-.079	.368	.081	-.197	....	-.042	.065
275	Enrol 6-14 U-R 1960	....	.275	....	-.860	.015	.103	....	....	-.039
Enrollment and income in pesos monthly, 1959										
278	Enrol 6/Inc. $200	-.028	.139	-.001	....	....	....	-.054	-.020	.149
280	Enrol 6/$601-$1,000	.165	....	.033	....	....	....	-.098	-.219	....
282	Enrol 6/(601-1,000)-(200)	-.297	-.029	.097	....	....	....	-.045	-.152	.032
Enrollment and occupation of father, 1959										
283	Enrol 6/agriculture	.426	-.135	.021	....	....	....	.015	-.018	.176
284	Enrol 6/professional	.170	....	-.061	....	....	....	.012	.229	....
Progress in school										
	Continuation rates--primary school									
293	B 4/3 rural 1942	....	-.197	.197	....	....	....	....	-.498	.735
296	B 4/3 urban-rural 1942	-.314	....	-.318	.094	-.168	.333	-.451	.238	....
299	B 4/3 urban 1960	....	....	....	-.181	.088	.144	....	....	....
304	B 4/3 rural 1960	....	-.327	.067	....	....	....	....	-.218	.620
307	B 4/3 urban-rural 1960	....	....	-.147	....	....	....	....	.034	....
308	4/3 urban 1960-1942	....	-.096	....	.067	.047	-.065	....	....	-.049
309	4/3 rural 1960-1942	....	-.202	....	.284	.111	-.028	....	....	-.049

330	B 5/1 urban 1942	.642	....	-.106	....	....	....	.151	-.529	....
331	B 5/1 rural 1942	.222	....	-.152	....	....	....	.480	-.347	....
332	B 5/1 urban 1960	....	....	-.226	....	....	....	....	-.579	....
333	B 5/1 rural 1960	....	....	-.160	....	....	....	....	-.140	....
	Secondary school									
338	Con Sec 3/1 M 1960	-.125	-.214	....	....	....	....	-.199	....	-.114
Age grade progress in school, 1963										
347	Age 10 Gr 1 MU	-.634	....	.397	....	....	....	-.303	.327	....
348	Age 10 Gr 1 MR	-.711	....	.046	.007	.045	.294	-.363	.341	....
349	Age 10 Gr 1 MR-MU	-.729	.179	....	-.246	.067	.199	-.385	....	-.497
359	Age 10 Gr 1 FU	-.686	....	.294	....	....	....	-.180	.327	....
360	Age 10 Gr 1 FR	-.787	.302	.152	-.097	-.004	.181	-.366	.230	-.384
361	Age 10 Gr 1 FR-FU	-.577	....	....	-.033	.125	.364	-.285	....	....
Pass rates										
368	Pass 2/Pres urban 1942	.360	.122	-.741	....	....	....	.016	-.181	.073
369	Pass 2/Pres rural 1942	.371	.100	-.705	....	....	....	.026	-.093	.017
376	Pass 2/Pres urban 1960	.205	....	-.816	....	....	....	.025	.020	....
377	Pass 2/Pres rural 1960	.190	-.146	-.603	....	....	....	-.035	.116	-.028
School facilities										
389	Sch Incomp urban 1942	-.040	.017	....	-.022	.022	.046	-.304	....	-.559
390	Sch Incomp rural 1942	-.150	.032	....	-.164	-.040	.255	-.738	....	-.899
396	Sch Incomp urban 1942-60	-.028	....	....	.095	.008	-.179	-.033	....	....
397	Sch Incomp rural 1942-60	.045	....	....	-.087	.124	.096	-.174	....	....

Fig. 27.--Matrix C, Factor 1.

Variable Number		Factor Loadings (±.800 and Above)
140	Literacy 10+ T 1940	.912
141	Literacy 10+ T 1960	.888
155	Literacy 10-14 M 1930	.884
156	Literacy 10-14 F 1930	.833
157	Literacy 10-14 M 1940	.942
158	Literacy 10-14 F 1940	.913
159	Literacy 10-14 M 1960	.891
160	Literacy 10-14 F 1960	.875
236	Adult 25+ 7+ Sch M 1950	.901
238	Adult 30+ 7+ Sch M 1960	.894
239	Adult 30+ 7+ Sch F 1960	.846
242	Adult 30+ 10+ Sch M 1960	.856

A short-cut estimate of the rank of the Federal District for these variables is 1.5 (from a high of 1 to 32).


UNITED STATES
Factor Scores
0.91 to 1.54
0.11 to 0.90
−0.41 to 0.10
−0.87 to −0.42
−2.15 to −0.88
BRITISH HONDURAS
GUATEMALA
A

by less developed states, implying impeded flow of influence out from the capital to its nearest neighbors and the diluting of the Federal District values by the in-migrants from surrounding backward areas.[1]

Changes in Literacy Between Generations

The spread of literacy was an important first step in the long pull toward an integrated economy and a unified society. Mexico had made prodigious efforts to diffuse the skills of reading and writing Spanish to the people of the cities and countryside, both within and outside the formal school system. Where did these changes manifest themselves and under what conditions?

Direct measures of change in literacy are of two main kinds: comparisons among different age groups at a given date, and comparison of data obtained at different dates. Although both are used, even if the complications introduced by migrations are ignored, the second approach presents two special problems: definitions could have been altered in successive censuses, and in earlier years recorders may have been generous in interpretation of literacy (as they were in 1930). For example, one might suspect the evidence (referring back to Table 35) that the literacy in 1960 of males above age 40 (63 per cent) exceeds that for 10-14 year old boys of 1940 (51 per cent). However, this seeming discrepancy is in the opposite direction from what might be expected if literacy definitions had been tightened over time. Taking the figures at face value, if older men have higher literacy than younger men of the same cohort, they can have acquired literacy after age 14. In substantial measure that did occur in earlier years, as is borne out by proportions of the population who acquired literacy without schooling. There is no way to be at all definite about the size of the error. However, intercensal discrepancies are more serious in their effects upon assessments of changes in absolute levels through time than in effects on measures of relative positions among states and of change or stability in that respect. Further use of inter-censal changes in literacy of adults will therefore be confined to correlation and factor analyses.

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[1] The Federal District was not included in the factor analysis. Its mean rank on the heavily weighted variables of Factor 1 of Matrix C was 1.53 (out of a possible 1 to 32).

For a preliminary description of the extent of change and of variabilities in the 1960 data are relied upon for different age groups, taking age-differences in literacy as indexes of change. But this also raises problems. Especially where migration has been substantial, successive past cohorts of children in certain states may have undergone an educational development sequence larger or smaller than age comparisons among presently (1960) resident populations would suggest.

Bearing these qualifications in mind, Table 39 supplies an interesting overview. For each of the sex and residence categories there are states in which there was little or no advance in literacy (under 5 per cent) between the oldest and middle or the middle and teen-age categories. There were two exceptions: middle compared to teen-age urban and rural females. Median progress was between 14 and 17 percentage points for all except rural girls, who were rapidly catching up (23 per cent), and the urban and rural boys (6 and 9 per cent). The largest differences (in states with the most age-change in literacy) ran close to 40 per cent for older rural males and younger rural females.

Changes in literacy rates were systematically associated with both initial level of literacy and initial proportions of adults who possessed more than primary schooling. Table 40 gives the correlations between proportions with post-primary schooling and age differences in 1960 literacy rates for

TABLE 39

DISTRIBUTIONS OF INTERGENERATION GAINS IN LITERACY BY AGE, SEX, AND RESIDENCE

	F.D.	Lowest Value	25th Percentile	Median	75th Percentile	Highest Value
Literacy						
Urban males						
15-19 minus 40-49	3	-1	4	6	9	17
40-49 minus 60+	7	0	11	14	17	29
Rural males						
15-19 minus 40-49	10	3	7	9	13	16
40-49 minus 60+	25	4	15	17	25	39
Urban females						
15-19 minus 40-49	10	7	10	15	21	31
40-49 minus 60+	11	0	11	15	18	25
Rural females						
15-19 minus 40-49	30	9	18	23	27	38
40-49 minus 60+	23	-4	8	17	21	32

TABLE 40

CORRELATIONS BETWEEN ADULT LEVELS OF SCHOOLING AND AGE DIFFERENCES IN LITERACY, 1960

	Adults Age 30+ with 7+ Years of Schooling		Percentages of the Older Age Category Literate in 1960	
	Males	Females	Males	Females
Age differences in literacy				
Urban males				
(15-19)-(40-49)	-.293	-.281	-.681	-.485
(40-49)-(60+)	-.258	-.197	-.158	-.129
Rural males				
(15-19)-(40-49)	.313	.201	.199	.213
(40-49)-(60+)	.373	.384	.430	.447
Urban females				
(15-19)-(40-49)	-.645	-.706	-.722	-.905
(40-49)-(60+)	.308	.344	.681	.543
Rural females				
(15-19)-(40-49)	-.296	-.363	-.091	-.464
(40-49)-(60+)	.548	.573	.622	.699

---

[a] For correlations with literacy-change from age (40-49) to (15-19) this refers to literacy rates of those aged 40-49. For comparisons with literacy-change from age 60+ to age 40-49 the literacy rates of the "older" age category refer to those aged 50-59.

sex-residence sub-populations. As one might by now expect, all intergeneration differences in literacy of urban males, and those for age 15-19 minus age 40-49 for both rural and urban females, are negatively correlated with proportions of adults possessing post-primary schooling. Small intergeneration changes in literacy in these sub-populations generally reflected relatively high literacy starting points in the older age groups. On the other hand, correlations of literacy change with adult post-primary schooling were positive for all rural male inter-generation comparisons and for older urban and rural females. The fact that younger as well as older rural males shared in an early-stage literacy-change pattern is once again evident. The sequential processes of development in diffusion of literacy are clearly displayed.[1]

The evidence concerning these geographic development patterns is bolstered by a reexamination of Factor 1 of Matrix C (Table 38) with its loadings of over .800 on virtually all measures of schooling and literacy regardless of sex, age, or date. That factor also had high positive loadings (.600+) on 1930 to 1940 change in literacy of both boys and girls aged 10-14. It had high negative loadings on these changes for 1940 to 1960, high positive loadings in the directions of urbanization (at 50,000+ population) and comparatively high incomes in agriculture and in manufacturing. The reversals between earlier and later periods in relationships between advance in literacy and urbanization are dramatic (see the top half of Table 41).

Similar differentiations between lead and lag areas are shown in the coefficients in the lower half of Table 41 as well. (1) There are high

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[1] In connection with cohort analyses, it is of some interest to notice that correlations between reported 1937 enrollment rates of 6-14 year olds and all measures of educational attainment among adults of 1950 were consistently a little higher than those between 1960 enrollments of 10-14 year olds and the various 1960 measures of adult schooling.

TABLE 41

CORRELATIONS OF URBANIZATION, WITH TIME DIFFERENCES IN LITERACY OF YOUTH, AND WITH SCHOOL ENROLLMENT RATES, 1930 TO 1960

% Gains in Literacy	Urban 2,500+ 1940	Urban 2,500+ 1960/1930	In-migrant/ Resident 1940	Pop. 50,000+ 1960	Urban 1960-1950/ 1960-1940
Literacy					
10-14 year olds					
1940 minus 1930					
Males	.457	.387	.549	.498	.039
Females	.358	.297	.508	.406	.075
1960 minus 1940					
Males	-.436	-.514	-.449	-.597	-.077
Females	-.554	-.482	-.574	-.595	-.112
Enrollment					
6-14 year olds urban-rural, 1960	-.230	-.402	-.287	-.118	.487
6-10 year olds males, 1930	.631	.407	.554	.315	.202
6-14 year olds M + F, 1937	.339	.593	.710	.301	.207
6-14 year olds M + F, 1960	.404	.385	.489	.087	.162

urban-rural contrasts associated with backwardness. (2) Early high enrollment rates are quite strongly correlated with rapid and extensive urban development. (3) More recent enrollments show a positive (but weaker) association with urbanization. The background in enrollment rates and their distributions are summarized in Table 42.

TABLE 42

DISTRIBUTIONS OF ENROLLMENT RATES
1930 TO 1960

	F.D.	Lowest Value	25th Percentile	Median	75th Percentile	Highest Value[a]
Enrollment of youth						
1960 6-14 years old						
Males	75	37	46	59	67	77
Females	74	32	44	56	64	76
1930 6-10 years old						
Males	84	25	38	45	59	73
Females	80	24	34	44	59	72
1937 6-14 years old						
Males + females	96	22	34	52	85	99
1960 6-14 years old						
Males + females	85	39	52	69	75	84
Males + females[b]	75	35	45	58	66	76

[a] When the Federal District has the highest value, the value of the next ranking state is listed.

[b] Estimated values are used to adjust for obvious error. Enrollments males plus females in 1960 as they stand exceed rates for males and females separately.

Generally, in both earlier and recent years, literacy of adults aged 40+ manifested closer correlations with school enrollments than did indicators of middle and high levels of adult schooling (Tables 43 and 44). This is true despite the decline in predictive value of literacy in the older generation. The progressive weakening in correlation of adult literacy with primary enrollments of children is displayed in Table 44. In Iran associations between literacy and school enrollment are substantially higher than in Mexico, even the Mexico of 1937, when correlations were in turn above 1960.

School Retention: Patterns

Three indices are available to trace the movements of children through the primary schools: continuation rates, pass rates on examinations, and proportions of pupils over-age. The presentation begins with the most difficult to measure, continuation rates, which are subject to large error. In the first place, they suffer from all the defects of reported enrollment rates; the number enrolled at the beginning or end of the year may have only a loose relationship to the number attending regularly. Subsequent comparisons are more sensitive to even minor errors in this respect when the data are used to estimate progress through school. Also, while normally it takes a year to complete a grade, those enrolled during a year include repeaters from last year, those transferring from other schools, those who may have dropped out for a while and returned. Nor can continuation rates alone tell how many who passed the year-end examination were eligible to continue but did not.

Continuation rates were computed for each grade year up to sixth by taking entrants to a given grade as a ratio to entrants to the preceding grade in the prior year, for rural and urban areas for 1942 and 1960. For example, the number entering fourth grade in 1960 were divided by the number entering

TABLE 43

CORRELATIONS BETWEEN ENROLLMENT OF YOUTH AND ADULT LEVELS OF SCHOOLING

Adult Levels of Schooling	Enrollment of 6-14 Year Olds
1960	1960
Males, 30+ years of age	
At least 1 year of schooling	.638
7+ years of school	.570
10+ years of school	.565
Females, 30+ years of age	
At least 1 year of schooling	.576
7+ years of school	.491
10+ years of school	.477
1950	1937
Males 25+ years of age	
At least 1 year of schooling	.715
7+ years of school	.659
10+ years of school	.619
Females, 25+ years of age	
At least 1 year of schooling	.633
7+ years of school	.589
10+ years of school	.515

TABLE 44

CORRELATIONS BETWEEN ENROLLMENT OF YOUTH AND ADULT LITERACY IN MEXICO AND IRAN[a]

	Enrollment of 6-14 Year Olds	
	1960	
Mexico		
Literacy, 1960		
10+ years of age males + females	.64	
40+ years of age, males	.67	
40+ years of age, females	.56	
	1937	
Literacy, 1940		
10+ years of age males + females	.75	
40+ years of age, males	.73	
40+ years of age, females	.70	
Iran		
	Enrollment 10-14 Year Olds	
	M	F
Literacy, 1956		
10+ years of age		
Males	.95	.86
Females	.86	.92
55-64 years of age, males	.77	.76
25-34 years of age		
Males	.91	.83
Females	.84	.92

---

[a] Source of Iran, Fattahipour, op. cit., Table 30, p. 143.

third grade in 1959. Computations were made also for enrollments at the end of the year relative to enrollments at its beginning, but many of the data using end-of-year figures were inadequate. (Correlations between the alternative sets of continuation rates were high nevertheless.)[1] In the discussion emphasis will be primarily on the ratio of fourth/third grade enrollments, which is particularly interesting in its own right and is also a good proxy for most of the other rates (which were omitted in most of the appendix tables as well). The completion of at least three years of school might be considered a requisite for sustained literacy. Tabulations were made for primary schools in rural areas offering at least three years of schooling. Transition from third to fourth grade was obviously a point at which dropouts were large. ("Incomplete schools" was defined as schools with less than four grades.)

The fourth/third continuation rates in rural areas in 1960 varied from 24 to 81 per cent with a median of 47; for urban areas the range was 76 to 98 per cent with a median of 89 per cent. In 1943, the range for rural sectors of the states had been from 14 to 72 per cent and for urban areas 53 to 94 per cent, with respective medians of 36 and 71 per cent. These, along with ratios and distributions at other grade levels, are summarized in Table 45.

Factor 9 of Matrix B (Table 38) gave more weight than any other to continuation rates. The highest loading on that factor is -.826, for changes between 1940 and 1960 in proportions of females occupationally active; along with this are negative loadings on economically active females in 1960 (-.512) on fourth/third continuation rates in rural areas in 1942 (-.498), and on fifth/first continuation rates in urban sectors for 1942 and 1960.

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[a] The correlations ran at or above .890 with two exceptions: sixth/fifth grade rural schools in 1942 (.648) and fifth/fourth grade urban schools 1960 (.874). One of the appendix tables gives a full set of intercorrelations.

TABLE 45

DISTRIBUTIONS OF RURAL AND URBAN CONTINUATION RATES, 1960 AND 1942

	2/1	3/2	4/3	5/4	6/5	5/1
1960 rural						
High	61	95	81	78	95	26.7
75th	56	81	57	59	81	8.5
Median	50	63	47	50	74	5.5
25th	48	51	35	39	66	1.9
Low	40	35	24	16	36	.8
1960 urban						
High	88	102	98	95	101	54.6
75th	79	99	93	85	92	47.4
Median	72	95	89	89	90	41.9
25th	64	89	84	93	85	32.9
Low	46	77	76	64	75	17.9
1942 rural						
High	49	84	72	37	107	6.59
75th	44	62	49	24	67	2.34
Median	38	49	36	17	42	.86
25th	34	41	28	12	27	.34
Low	23	22	14	0	0	0
1942 urban						
High	83	94	94	89	106	49.5
75th	65	86	79	77	94	26.4
Median	56	76	71	70	80	18.5
25th	48	69	65	66	71	14.0
Low	36	56	53	39	47	9.6

The correlation between 1940 and 1960 proportions of incomplete schools (only three grades) in rural areas was fairly high (.618), but urban systems shifted their relative positions in this respect very substantially (an inter-temporal correlation of only .170, Table 46). The highest of the inter-temporal correlations relating to schooling of youth were for total enrollments and for urban pass rates at Grade 2. (Pass rates are the number passing the year-end examination compared to those present at the time of the examination.)

TABLE 46

CORRELATIONS BETWEEN 1940 AND 1960 EDUCATION-OF-YOUTH VARIABLES

Enrollment 6-14 year (M+F)	.719
Continuation 4/3 urban	.310
Continuation 4/3 rural	.496
Schools incomplete urban	.170
Schools incomplete rural	.618
Pass 2/present urban	.726
Pass 2/present rural	[illegible]

Factor 4 of Matrix B (Table 38) had its heaviest loadings (all negative) for second grade pass rates (both rural and urban in both 1942 and 1960). It had moderately high positive loadings for traditional culture traits, negative loadings on farm mechanization and hired farm labor and for facilities such as water supply, clearly describing a backward setting. Pass rates had higher correlations with other traits in 1942 than 1960 (Tables 47 and 48). In 1942, rural pass rates showed stronger associations with enrollment and with urban continuation rates than in 1960.

Age-grade relationships proved to be the most interesting of the measures in degree of association with non-education traits indicating development (or retardation). The associations with other education variables also

TABLE 47

INTERCORRELATIONS BETWEEN SCHOOLING OF CHILDREN AND MIDDLE LEVELS OF SCHOOLING OF ADULTS 1930 TO 1950

		Enrol 6-14 1937	Literacy 10-14 1940		Adults 30+ 7+ Yrs of School 1950	
		T	M	F	M	F
	Variable Number	265	157	158	236	237
265	Enrol 6-14 T 1937	....				
157	Lit. M 10-14 1940	.775	....			
158	Lit. F 10-14 1940	.787	.979	....		
Adult levels of schooling, 1950						
	Age 25+					
236	7+ years M	.659	.890	.894	....	
237	7+ Years F	.589	.820	.860	.938	....
Continuation rates--primary school, 1942						
293	B 5/3 R	.413	.477	.437	.402	.353
331	B 5/1 R	.293	.359	.339	.299	.346
330	B 5/1 U	.474	.657	.639	.636	.633
390	Sch incor[illegible] R	-.237	-.302	-.291	-.249	-.291
389	Sch in[illegible]	-.113	-.201	-.203	-.070	-.075
369	Pass 2/pres R 1942	.587	.495	.588	.499	.599
368	Pass 2/pres U 1942	.347	.389	.468	.497	.600
	1930					
267	Enrol 6-10 M	.596	.762	.700	.654	.542
155	Literacy 10-14 M	.703	.938	.897	.800	.733
156	Literacy 10-14 F	.702	.929	.923	.865	.823

TABLE 47--Continued

Cont. Rates 1942 4/3	5/1		Schools Incomplete		Pass Rates 1942		Enrol 6-10	Lit 10-14
R	R	U	R	U	R	U	M	M
293	331	330	390	389	369	368	267	155
....								
.640	....							
.633	.640	....						
-.783	-.695	-.500	....					
-.513	-.442	-.412	.632	....				
.219	.450	.474	-.328	-.272	....			
.169	.318	.479	-.324	-.275	.836	....		
.428	.262	.345	-.276	-.032	.149	.074	....	
.517	.339	.548	-.332	-.128	.347	.257	.912	....
.489	.444	.569	-.403	-.220	.545	.434	.744	.895

TABLE 48

INTERCORRELATIONS BETWEEN SCHOOLING OF CHILDREN AND MIDDLE LEVELS OF SCHOOLINGS OF ADULTS, 1960

		Enrol 6-14	Lit. 10-14		Adult Levels of Schooling Age 30+			
					No School		7+ Years	
		T	M	F	M	F	M	F
	Variable Number	266	159	160	228	229	238	239
266	Enrol 6-14 T	....						
159	Lit. M 10-14 1960	.725	....					
160	Lit. F 10-14 1960	.719	.984	....				
	Adult levels of schooling							
	Age 30+							
228	No school M	-.638	-.944	-.937	....			
229	No school F	-.576	-.931	-.959	.928	....		
238	7+ years M	.570	.796	.791	-.853	-.828	....	
239	7+ years F	.491	.796	.813	-.840	-.859	.953	....
242	10+ years M	.565	.767	.761	-.819	-.803	.991	.935
243	10+ years F	.477	.771	.777	-.806	-.822	.934	.985
	Continuation rates--primary school							
304	Cont. B 5/3 R 1959-1960	.250	.302	.237	-.239	-.134	.072	.064
333	Cont B 5/1 R 1959	.363	.613	.603	-.646	-.557	.493	.540
332	Cont B 5/1 U 1959	.463	.522	.506	-.508	-.397	.506	.470
395	Sch incomp. T	-.257	-.634	-.624	.610	.646	-.515	-.571
377	Pass 2/pres R	.006	.299	.372	-.343	-.437	.268	.418
376	Pass 2/pres U	.099	.361	.376	-.338	-.401	.369	.443
	Age-grade progress							
348	Age 10, Gr 1 MR	-.674	-.761	-.798	.796	.698	-.634	-.654
347	Age 10, Gr 1 MU	-.586	-.756	-.779	.721	.734	-.694	-.733
360	Age 10, Gr 1 FR	-.717	-.903	-.911	.868	.832	-.699	-.718
359	Age 10, Gr 1 FU	-.689	-.773	-.802	.740	.743	-.700	-.694

TABLE 48--Continued

Continuation Rates								Age 10, Grade 1			
10+ Years		R 4/3	R 5/1	U	School Inc.	Pass 2/ Pres		Males		Females	
M	F							R	U	R	U
242	243	304	333	332	395	377	376	348	347	360	359
....											
.932	.										
.070	.071	....									
.482	.533	.655	....								
.477	.444	.490	.593								
-.519	-.561	-.623	-.777	-.316							
.281	.423	-.221	.315	.021	-.290	....					
.404	.484	-.025	.328	.293	-.279	.710	....				
-.605	-.617	-.329	-.648	-.593	.488	-.319	-.215	....			
-.676	-.699	-.254	-.537	-.701	.435	-.378	-.543	.704	....		
-.669	-.684	-.364	-.618	-.666	.564	-.285	-.285	.867	.794	....	
-.667	-.627	-.194	-.424	-.635	.370	-.230	-.368	.696	.906	.827	....

5

were neatly patterned. A high proportion of students who are over-age for their grade measures retardation. Some of the associations are shown, by way of illustration, in the factor clusters (Matrix C, Factor 1 in Table 38 and Matrix B, Factor 1, in Table 3). In both of these factors there were high positive loadings on enrollments and literacy of youth with negative loadings on slow passage through school (age 10 in Grade 1). The first matrix showed high loadings on middle levels of schooling of adults and the latter on proportions of economically active white-collar, clerical, and professional occupations. Table 49 summarizes some of the relationships between age grade progress and lead or lag variables. One measure of the isolation of areas characterized by retardation is the high negative correlations with radios, and, on the level of interpersonal communications, the low literacy of adult females. Slow progress through school was most pronounced for urban females where incomes from manufacturing were low.

In combination with continuation and pass rates, these variables for age-grade progress may reflect late entry to school and high absenteeism, with associated failure in examination, repeating and dropout. But the patterns are not always so obvious. An area might have low continuation rates, many overage pupils, and low pass rates: obviously a backward area. But one may find a high continuation rate along with high proportions over age and low pass rates--which might be interpreted as evidence of a lagging area in which nevertheless there is a rising determination to keep children in school (e.g., Oaxaca, Guerrero, Mexico). Or there may be a low continuation rate with many overage pupils but a high pass rate, meaning that there are many dropouts even though relatively large proportions of those who take the examination pass and a large proportion of each grade are repeaters or late starters (Michoacan, Guanajuato). A high continuation rate, "normal" age-grade patterns, and a

TABLE 49

ASSOCIATIONS BETWEEN AGE-GRADE PATTERNS AND SELECTED INDICATORS OF LEAD AND LAG IN MODERNIZATION

	Age Grade Patterns, 1963							
	Retardation Grade 1, Age 10+				Progress Age 10, Grade 3+			
	Urban		Rural		Urban		Rural	
	M	F	M	F	M	F	M	F
Lit. 40-49 FU	-.677	-.704	....	....	....	....	....	....
Lit. 40-49 FR	....	....	-.651	-.774	....	....	....	....
Clerical/EcAct	-.658	-.741	-.611	-.704	....	....	....	....
Ag/EcAct M	.605	.606	.652	.692	-.510	-.575	-.571	-.449
Farm mech. 1950	-.698	-.725	-.529	-.663	....	....	....	.....
Ag inc. over $500	-.655	-.684	-.577	-.630	....	....	....	....
Mfg inc. over $500	-.659	-.748	-.650	-.654	....	....	....	....
Employ 8-11	.731	.747	.780	.774	....	....	....	....
Barefoot M	.509	.530	.455	.546	-.324	-.360	-.327	-.256
Radio	-.704	-.671	-.713	-.709	....	....	....	....

high pass rate describe a system in which students progress steadily taking one year per grade.

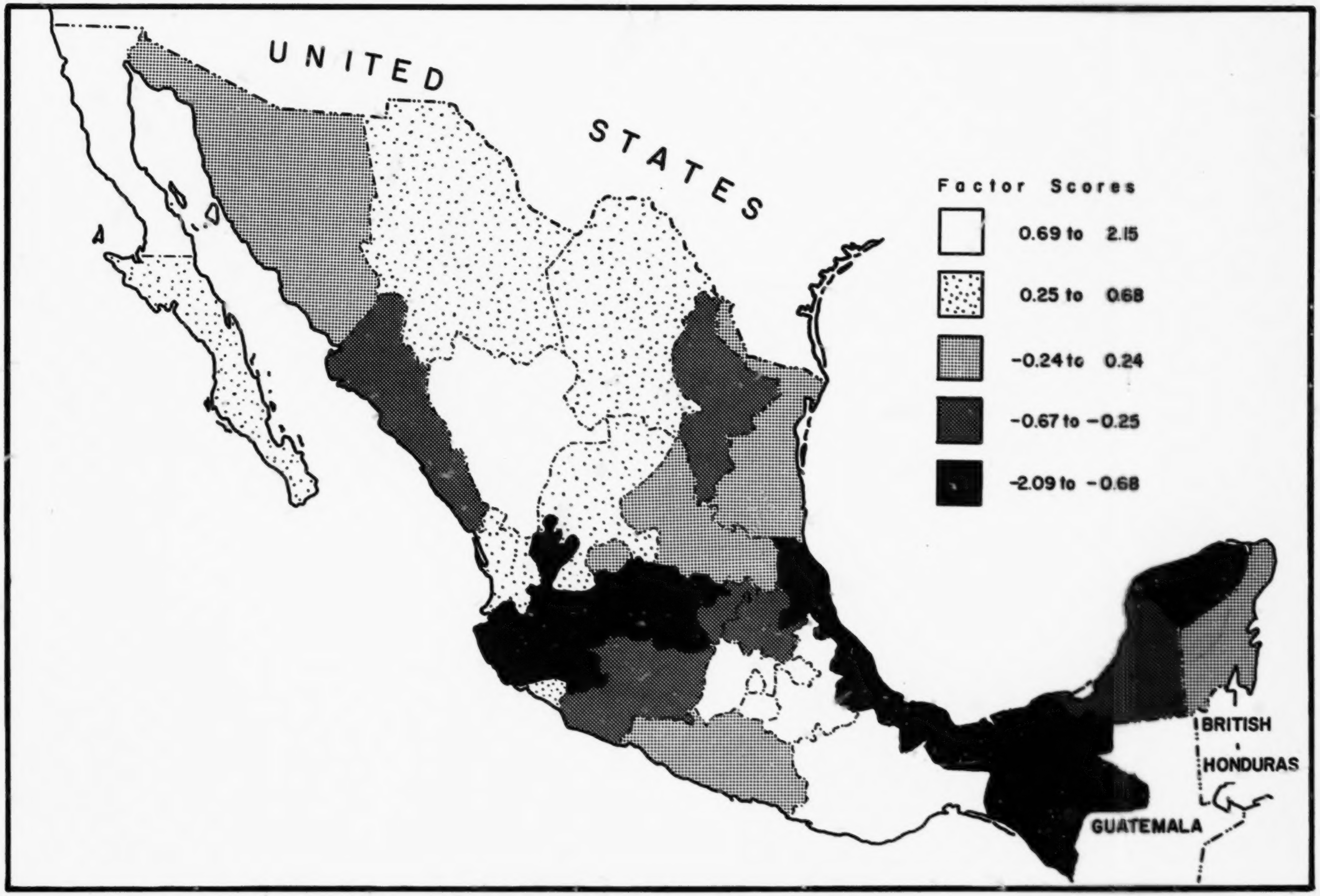
An interesting mixture of traits was picked up by Factor 3 of Matrix C, mapped in Figure 28. This factor might be described as rural progress in schooling. Here there was a negative loading of -.738 on the number of incomplete rural schools in 1942 and on urban-rural differences in continuation rates in 1960, together with positive loadings on rural continuation rates in 1960 and age-grade progress in rural schools. The geographic pattern is very unlike any previous map. It is particularly interesting because some elusive traits of the rural environments of the high scoring states seem to be involved, traits that are not revealed by all-state variables or by the main agricultural variables.

Coming back to the broader socio-economic context, a pattern that summed up educational and economic traits associated with lead positions in development very neatly was Factor 1 of Matrix C, mapped above in Figure 27. This factor related high literacy attainments of youth with high levels of schooling of adults. A comparison of the more generalized over-all spatial pattern of Figure 27 with areas of rural progress in schooling of youth (delineated in Figure 28) poses further questions concerning the constraints upon diffusion of schooling and the attributes of the population that may distinguish areas where acceptance of schooling is manifest. Can we identify with any more precision the characteristics that raise or lower propensities to attend school or to continue through the primary years? Chapter VI attempts to explore this question by the use of multiple regression analysis taking enrollment rates as the dependent variables.

Fig. 28.--Matrix C, Factor 3.

Variable Number		Factor Loadings (±.800 and Above)
296	Cont B 4/3 Urban-rural 1942	-.451
331	Cont B 5/1 Rural 1942	.480
390	Schools Incomplete rural 1942	-.738

A short-cut estimate of the rank of the Federal District for these variables is 8 (from a high of 1 to 32).


UNITED STATES
Factor Scores
0.69 to 2.15
0.25 to 0.68
-0.24 to 0.24
-0.67 to -0.25
-2.09 to -0.68
BRITISH HONDURAS
GUATEMALA

CHAPTER VI

DETERMINANTS OF THE DIFFUSION OF PRIMARY SCHOOLING

In the preceding discussion of the relationships of adults levels of education to the schooling of youth, a simplified framework was introduced to clarify the diffusion process. This model will be expanded to explain the geographic distribution of primary enrollment (and retention) rates as a function of (a) the spatial structures of communication networks, and (b) indicators of differences in economic alternatives and attitudes that influence decisions about schooling.

The theoretical framework integrates certain diffusion theories of human geographers with economic decision theory. Scholars working with central-place theory have developed a technique for measuring the influence of one population aggregate upon another as a function of size and distance. It has been assumed that the larger the population of place B, the more influence it will have on a population in place A, but the greater the distance from B to A the less is B's effect upon A. To obtain the "population potential" of A we would add to the population of A the population of all other places, B_1, B_2,B_3, each divided by its distance from A. Fattahipour tested this concept of population potential in his study of the diffusion of education in Iran but found it inadequate; both the central and intermediate cities remained self-contained with little spillover of educational stimulation to the hinterlands.[1]

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[1] Fattahipour, op. cit., pp. 289-91, Appendix B.

The Hägerstrand model, with its "information fields" and "resistances" to diffusion, is quite different. For Sweden, he found a remarkable stability in geographic patterns for diffusion of many innovations (including schooling) over a century and a half. He identified established centers from which innovations spread, and these centers appeared to form a status order; ideas from the centers were more likely to be accepted. What he calls private information fields are person-to-person communication networks, and he demonstrated that the most effective flow of information followed such "tellings." As indexes of these interpersonal linkages he used telephone usage and migration routes. Mass media appeared to promote new ideas only when supported by person-to-person communication.

But people do not always accept new ideas upon first hearing of them. Reactions depend upon the economic and cultural setting and upon how readily a particular innovation fits into that setting--hence the concept of "resistance," as the degree of ease with which particular new ideas are accepted for any given intensity of "tellings." Some new ideas may be adopted almost immediately, some only after repeated tellings, some not even then.

Using Hägerstrand's general model as a guide, this chapter treats enrollment of 6-14 year olds as the innovation being diffused within the states of Mexico. Spatial variation in enrollment will be treated first as a function of information fields, approximated by patterns of communication from urban to rural areas and across regions of the country. These variations are then examined from the resistance side, in a crude decision model that analyzes how the economic and cultural setting affects behavior with any given information flow. In many instances, direct measures of information fields and decision factors cannot be obtained and indirect indexes must be used.

The spatial distribution of educational attainments of adults as discussed in the preceding chapter could be interpreted primarily as an independent indicator of "intensity of tellings" with respect to events and ideas beyond the local scene and on the frontiers of change. This is in contrast to enrollment rates of children, the innovation or dependent behavior variable. It is assumed that educated adults have more contacts with new ideas and that a locality with a large proportion of educated adults would have more interchange of information relevant to decisions about schooling.

But the level of adult education can be considered from the resistance side, also, making people more eager (or more opposed) to keeping their children in school for both economic and non-economic reasons. The more educated the adults, the greater the presumption that aspirations for education of children will be high, whether as foundation for a career or simply viewing education as a value in itself.

The Geographic Patterns of Primary-School Enrollment

Though access to schools in Mexico has broadened over the past generation or more, wide variation in their use and in their effectiveness persists; some states remain traditional while others have most of the earmarks of modernity. It is in the north generally and in particular parts of the central plateau (mainly in the capital district) that progress has been most marked. The Federal District is one of the most modernized urban areas in the world. By most measures, the three states facing south on the Pacific are the most retarded: Guerrero, Oaxaca, and Chiapas. The northern states are better off than most on the central plateau, the latter displaying extremely diverse levels of development within a densely populated region. But there are marked variations within regions and even within states.

Three maps (Figures 29 through 31) show state rankings on enrollments of 6-14 year old children over-all and in urban and rural areas. These reflect the complex diversities of development among the parts of Mexico. The over-all enrollment rate (Figure 29) provides a good general image of regional development, both cultural and economic. The marked disparity between north and south, the complex variations in the central area, and the lack of clear associations between urban and rural rankings suggest that the gradients implied in conventional population-potential models would not provide an adequate explanation for the observed pattern.

Many factors that could be presumed to underlie these geographic patterns have been examined in the preceding chapters. A few that are put together in Table 50 bring out a looseness of rural-urban relationships that is suggested in most of the findings. The literacy of urban males aged 40-49 has a modest positive relationship with the enrollment of urban 6-14 year olds (.385) and a negative relationship to the employment of children aged 8-11 (-.315). With rural males the pattern is similar, but the correlations are somewhat higher (.490 with literacy of rural males in their forties and -.571 for employment of young boys). There is a stronger negative relationship between literacy of older men and employment of children in the rural than in the urban areas (-.777 and -.512), but the urban-rural cross-correlations on enrollment rates are negligible. Many of the coefficients in the first column of Table 50 tend to be higher than corresponding coefficients in the second and third columns because the variables involved are in part predicting degrees of urbanization or rurality (and hence the weights of rural and urban enrollment rates in the total) but do not differentiate efficiently among urban or among rural populations taken separately. However, the one variable that is best associated with all others in this table is the rate of employment of 8-11 year olds.

Fig. 29.--Enrollment rates of 6-14 year olds, males plus females, 1960.

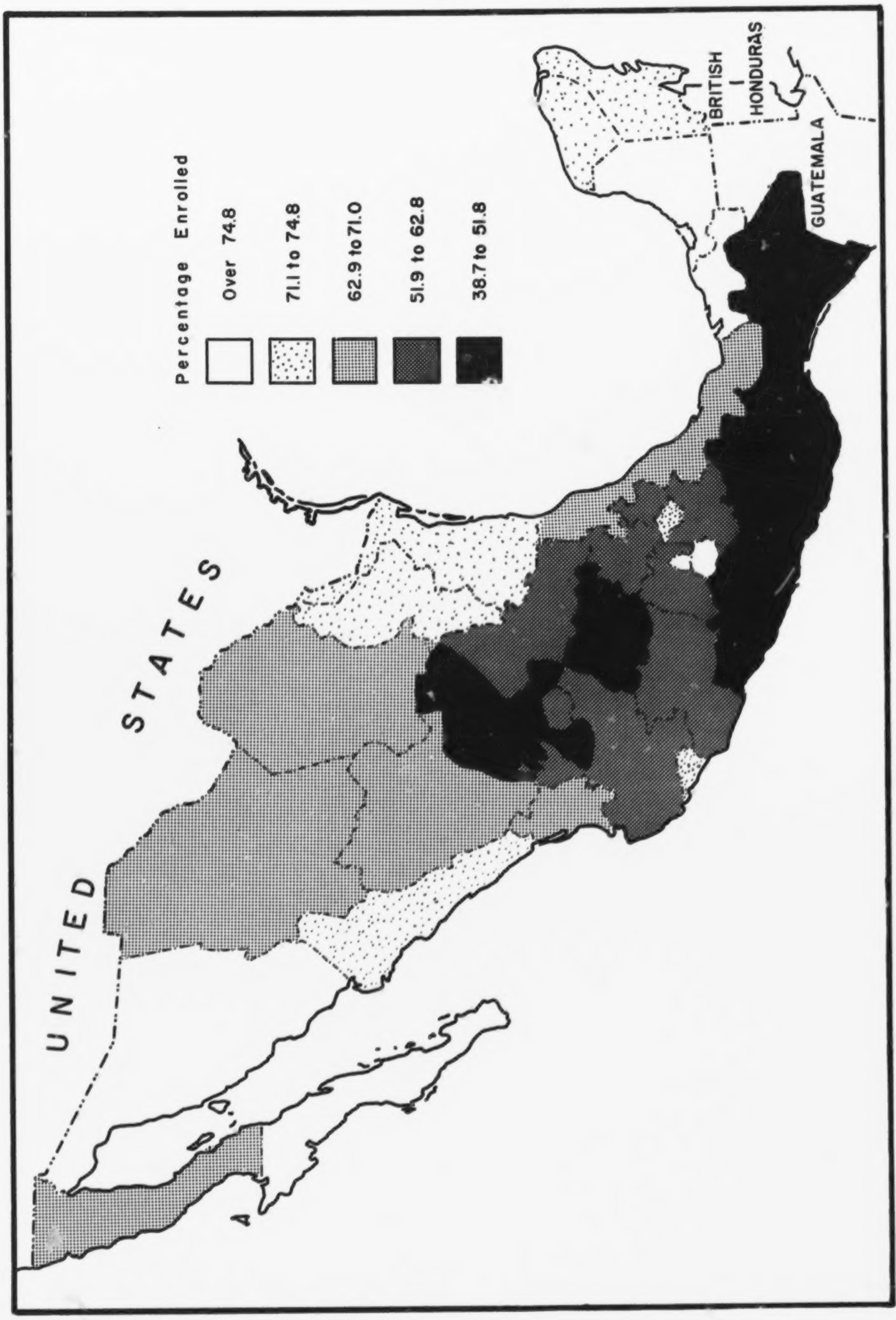

Percentage Enrolled
Over 74.8
71.1 to 74.8
62.9 to 71.0
51.9 to 62.8
38.7 to 51.8
UNITED STATES
BRITISH HONDURAS
GUATEMALA
A

Fig. 30.--Urban enrollment rates of 6-14 year olds, 1960.

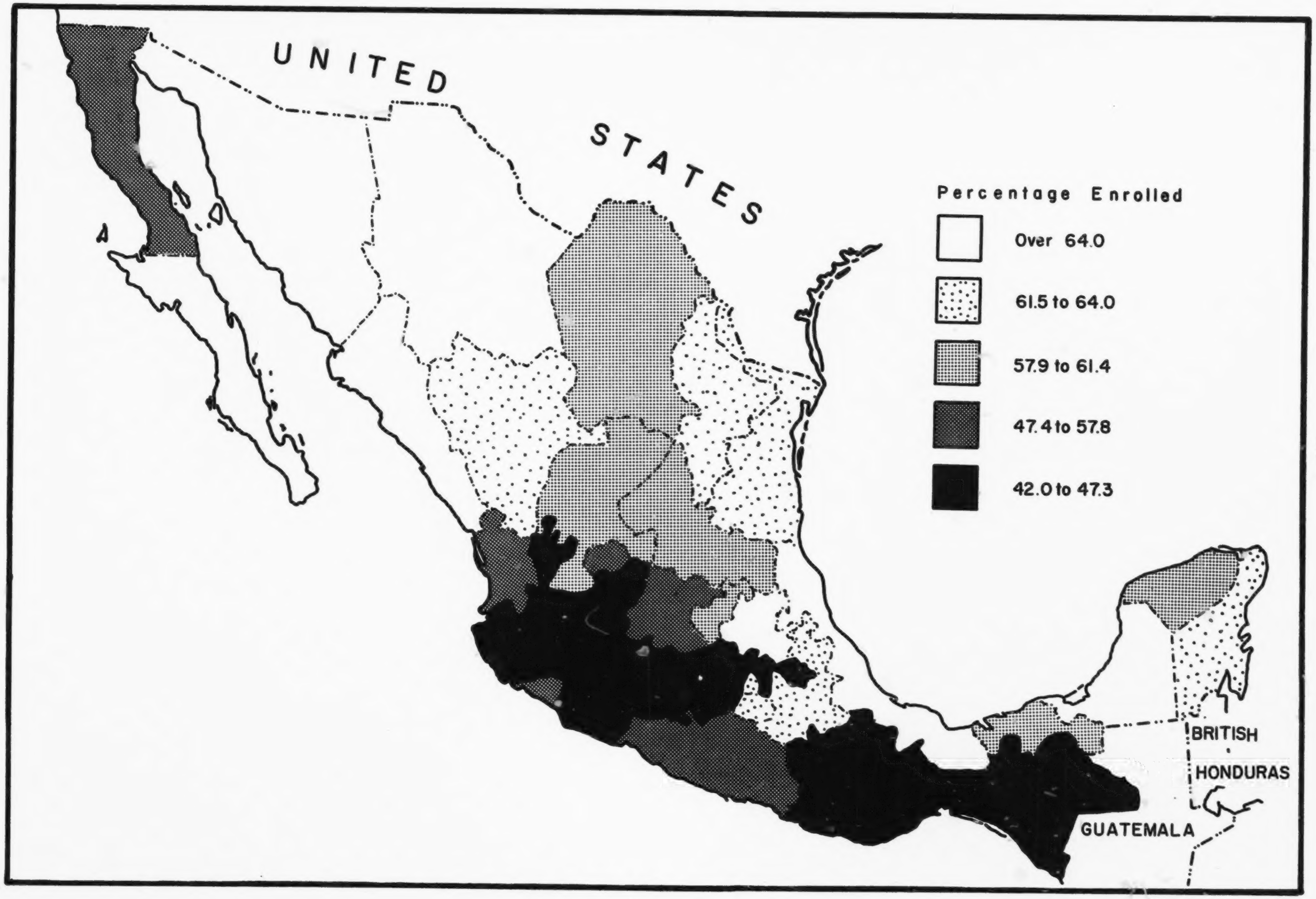

UNITED STATES
Percentage Enrolled
Over 64.0
61.5 to 64.0
57.9 to 61.4
47.4 to 57.8
42.0 to 47.3
BRITISH HONDURAS
GUATEMALA

Fig. 31.--Rural enrollment rates of 6-14 year olds, 1960.

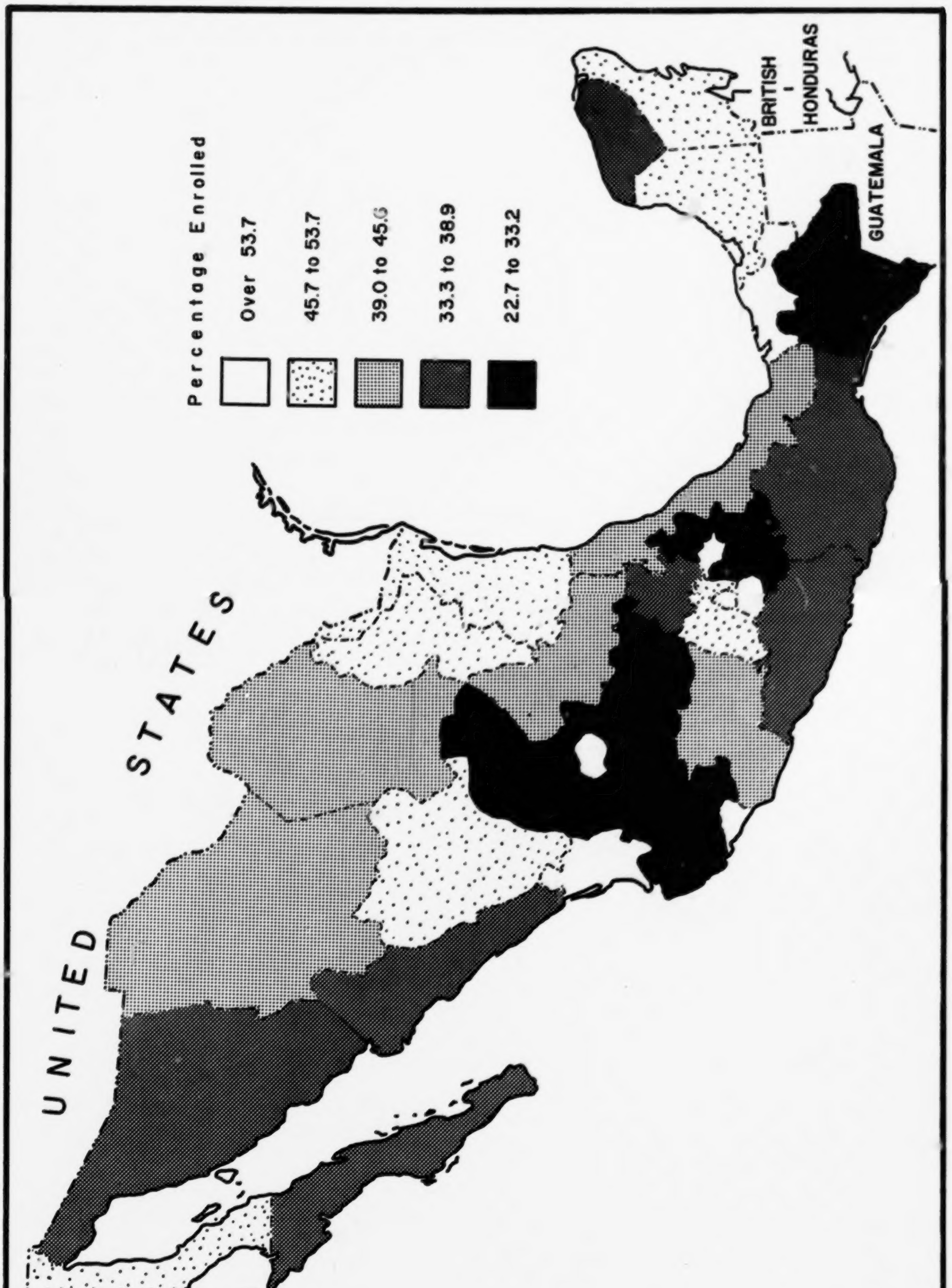

UNITED STATES
BRITISH HONDURAS
GUATEMALA
Percentage Enrolled
Over 53.7
45.7 to 53.7
39.0 to 45.6
33.3 to 38.9
22.7 to 33.2

TABLE 50

ILLUSTRATIVE CORRELATIONS OF ENROLLMENT RATES AND OF CHILD EMPLOYMENT WITH SELECTED VARIABLES, 1960

	Enrollment Rates, Age 6-14			Employment of Males Age 8-11
	Total	Urban	Rural	
Enrollment rates; rural	.543	-.085	....	-.571
Employment of males age 8-11	-.709	-.315	-.571	....
Percentages literate:				
Urban males, 40-49	.303	.385	-.055	-.512
Rural males, 40-49	.585	.105	.490	-.777
All males 10-14	.725	....	....	-.790
All females 10-14	.719	....	....	-.811
Proportion of males employed in				
White collar jobs, M	.568	.125	.269	-.648
Clerical jobs, T	.607	.241	.252	-.680
Agriculture	-.569	-.129	-.338	.679
Proportion of females 12+ economically active	.213	.228	.175	-.169
Proportion of males barefoot	-.156	.004	.112	.480
Incomes (per cent over 500 pesos)				
Manufacturing	.579	.404	.278	-.727
Agriculture	.493	.316	.176	-.644
Urbanization, 1960				
Proportions 2,500+	....	....	....	-.541
Proportions 50,000+	.087	-.132	.009	-.511
Urban 1960/1930	.385	-.155	.423	-.381
Proportions of in-migrants	....	-.016	.417	-.542
Radio	.526	.157	.257	-.684
Movies	.475	.100	.215	-.510

In this zero-order correlation matrix, traditionalism (or poverty) as indicated going barefoot, has little connection with either urban or rural enrollments (.004 and .112 respectively). Yet there are negative correlations between going barefoot and adult literacy, which is correlated with enrollments. Proportions of males barefoot is related inversely to the literacy of older urban males (-.656) and of older rural males (-.492). This prepares one for the reordering of some of these relationships that will emerge when some multiple regressions and partial correlations are explored later in this chapter. Indigenous components of local cultures are not the drag on diffusion ~~of~~ primary schooling that might have been expected a priori.

Variations in Enrollments as an Aspect of Rural-Urban Communication Fields

Two diagrams (Figures 32 and 33) were drawn to represent the "information" and the "resistance" sets of factors respectively. (The actual variables available for analysis are in the rounded boxes and the concepts or hypothetical variables in the square boxes.) The objective is to explain enrollment of children in school, and the network of relationships displayed reflects the causal hypotheses derived from combining the Hägerstrand and human-investment models. Although overall enrollment rates by states are given first, it is the distinctive characteristics of the rural as against the urban influences and behavior that are especially interesting.

Beginning with Figure 32, which is an elaboration of the diagram presented in Chapter V, information can flow within either urban or rural areas and between them. (The intra-rural tellings were not put in the diagram.) The straight arrows indicate positive influence on diffusion of knowledge about the effects of education and tellings that presumably convey attitudes favorable toward education. The arrows that turn back on themselves indicate presumptively

Fig. 32.--Information and communication channels.

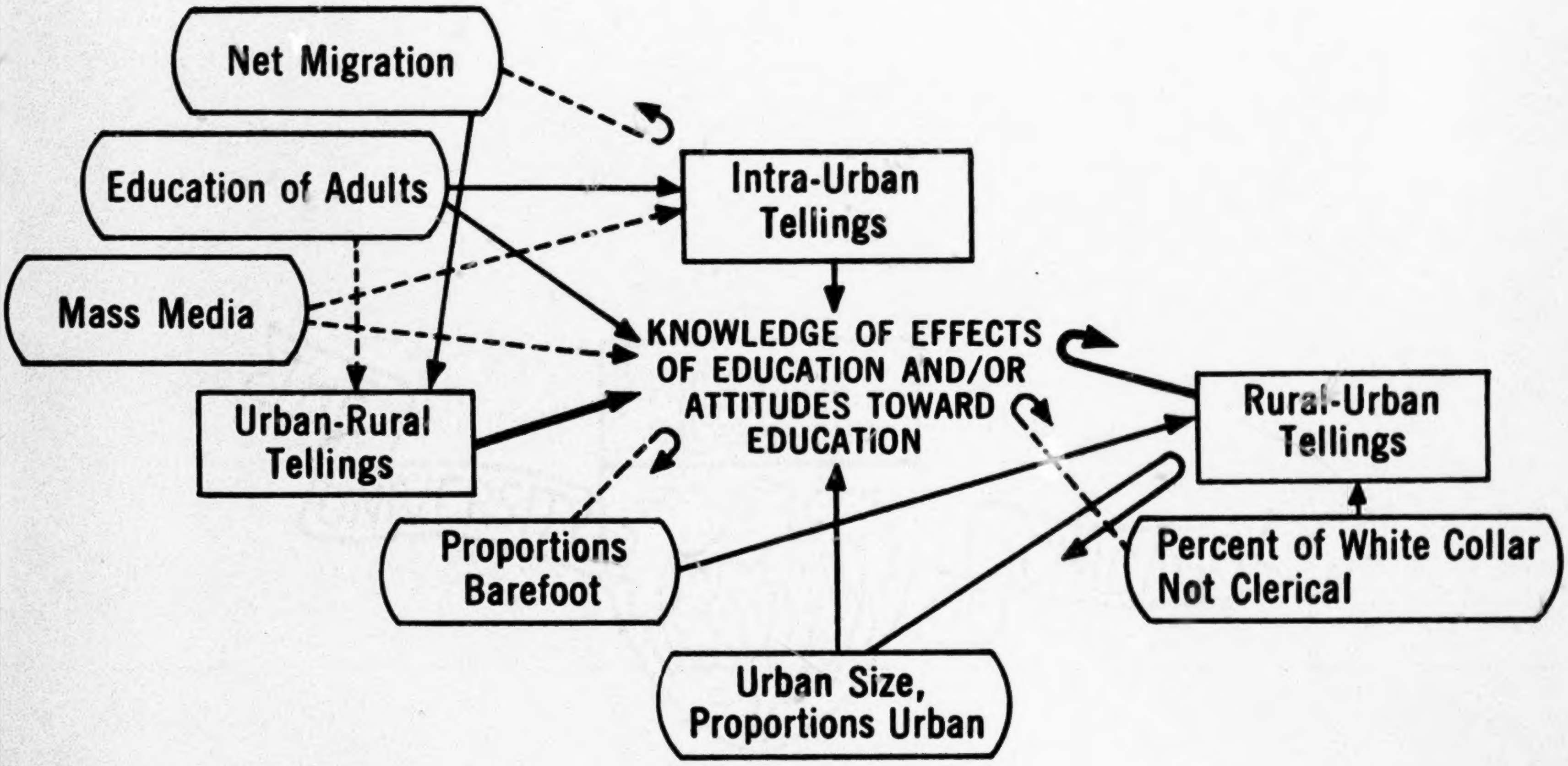
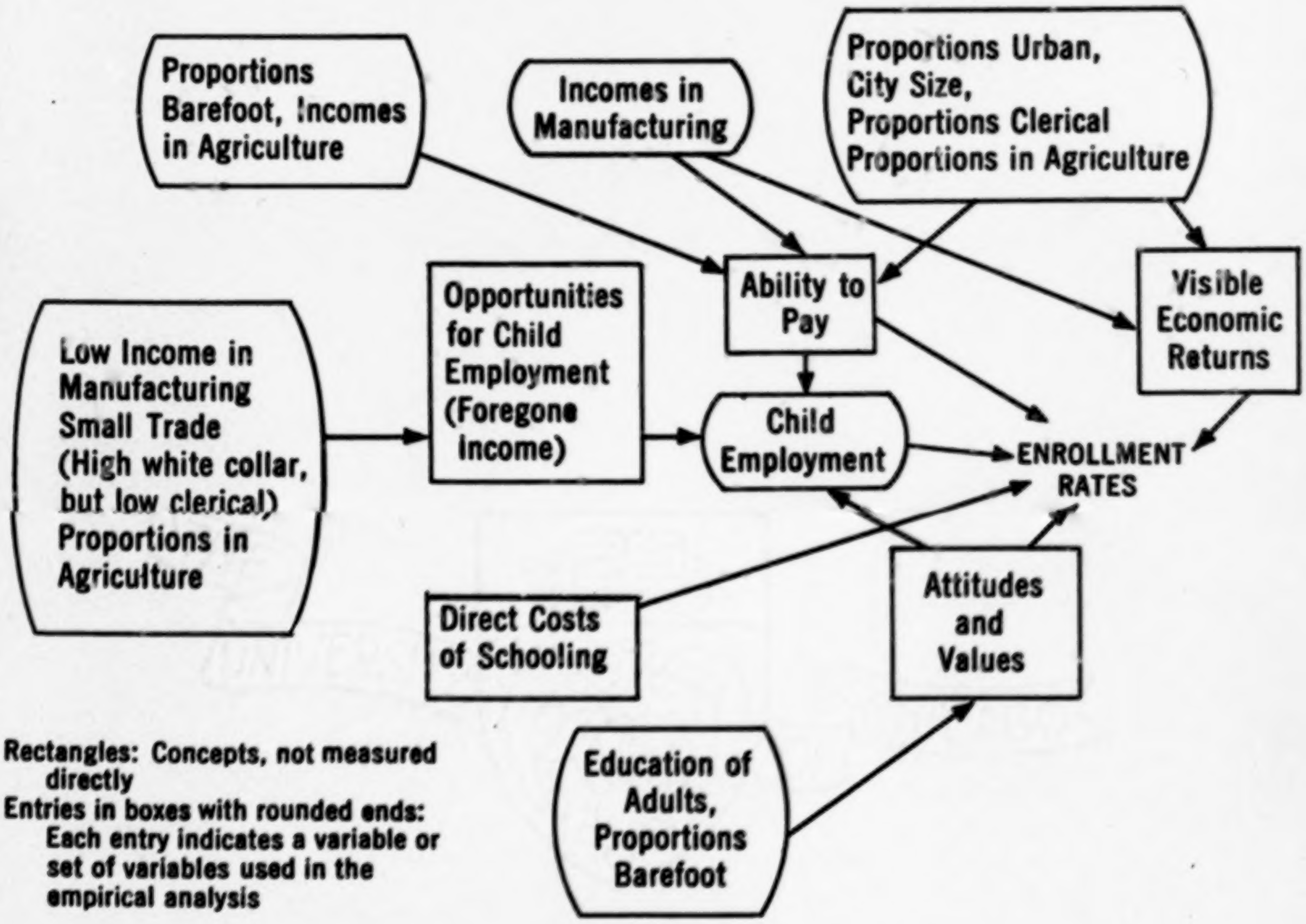

Net Migration
Education of Adults
Mass Media
Intra-Urban Tellings
Urban-Rural Tellings
KNOWLEDGE OF EFFECTS OF EDUCATION AND/OR ATTITUDES TOWARD EDUCATION
Rural-Urban Tellings
Proportions Barefoot
Percent of White Collar Not Clerical
Urban Size, Proportions Urban

Fig. 33.--Decision model.


Proportions Barefoot, Incomes in Agriculture
Incomes in Manufacturing
Proportions Urban, City Size, Proportions Clerical Proportions in Agriculture
Ability to Pay
Visible Economic Returns
Low Income in Manufacturing Small Trade (High white collar, but low clerical) Proportions in Agriculture
Opportunities for Child Employment (Foregone income)
Child Employment
ENROLLMENT RATES
Direct Costs of Schooling
Attitudes and Values
Education of Adults, Proportions Barefoot

Rectangles: Concepts, not measured directly

Entries in boxes with rounded ends: Each entry indicates a variable or set of variables used in the empirical analysis negative effects. When an element in the chart has a traditionalist influence, arrows from it to "Knowledge of effects of education and/or attitudes toward education" turn back or reverse themselves. Here are factors that presumably impede or delay the spread of information and the orientation to education upon which the decisions to enroll and continue in school are based. (Hereafter such arrows will be referred to as "reversing arrows."

One would expect innovations to diffuse first within and among urban places, with weaker influence upon the surrounding hinterlands (except as they may be specifically related to agricultural practices). Also, areas with high rates of in-migration presumably offer greater opportunities and display more economic modernization; higher enrollment rates might be expected there. These assumptions are generally upheld in the zero-order correlations. However, more refined analysis points to distinctive urban types. In 1960, there was no relationship (a correlation of -.016) between urban enrollments and net in-migration. Furthermore, controlling for other key variables, urban enrollments for children aged 6-14 years were depressed by large in-migration rates; these findings will be presented later. For the moment it is sufficient to note this fact, which is one of the justifications for the reversing arrow in Figure 32. Evidently, newly arrived migrants bring their traditional rural culture with them, tend to live in self-contained neighborhoods, and only slowly accept the emphasis on schooling.

Factor 5 of Matrix D (Table 38) would give high scores in a setting in which rural progress in schooling was marked but urban rates lagged despite the fact that whatever urbanization of the population had occurred had come relatively early. Urban enrollments are low in 1960 (a factor loading of -.873) gaps between rural and urban areas in enrollments are minimal (a loading of -.860), and the factor loading for urbanization (1960-1950)/(1960-1940) was

-.484. It is interesting that in overall zero-order correlations for 1960, the data in Table 49 of Chapter V indicate that high proportions of overage urban male and female pupils tended to occur more often in states that were preponderantly agricultural, with correlations of .605 and .606; these are closer than might be expected to the analagous correlations of .652 and .692 respectively for over-age rural boys and girls. Yet the negative correlations between proportions of males in agriculture and either rural or urban enrollments were low (-.338 and -.129 respectively). It is evident that late entry and retardation due to absenteeism differentiate among the sub-populations of Mexico today in ways that are not picked up in the data on enrollment rates. A delayed relaying of information and attitudes is bringing some of these groups into the schools, where resistances to repeated schooling-oriented tellings are belatedly, and still only partially, overcome.

The nature of recent influences by progressive urbanization upon school progress in rural areas is evidenced in a number of ways. Thus (a) there is a moderate positive association between development of cities (proportion urban 1960/1930) and 1960 rural enrollment rates (shown in Table 50). Also (b), there are stronger negative associations of urban growth with rural than with urban proportions of pupils over-age and yet slightly higher associations of urbanization with urban than with rural continuation rates. With reference to (b) the correlations of urban growth with 1960 proportions in Grade 1 who were 10 years old or more were only -.195 and -.360 for urban, but -.368 and -.404 for rural boys and girls. On the other hand, correlations of 1963 urban and rural fourth/third continuation rates (taking both sexes together) with urban growth were .571 and .436. Examination of the spatial patterns taken by these and associated relationships provides clear evidence that the extent and effectiveness of urban-to-rural tellings differs substantially from one part of Mexico to another, however. Also, some of the diffusion of tellings and adoptions take place primarily within an agricultural context. This has been quite evident where extension of irrigation and farm mechanization has been accompanied by a reduction in the differences between rural and urban enrollment rates--a pattern indicated for states with high scores on Factor 5 of Matrix D, discussed above.

The preceding comments on 1960 relationships were focused primarily uppon either rural or urban performance, rather than the averages that combine urban and rural populations. Unfortunately, the earlier data allow comparisons for entire state populations only. Some correlations that may be compared with those in the first column of Table 50 are presented in Table 51. As expected in the light of evidence presented in Chapters IV and V, the earlier associations of both enrollment and child literacy with proportions of the population urban were much higher than those of 1960. The mass-media indicator, attendance at movies, was also substantially higher in the period 1930 to 1940 than more recently; although the association was still in evidence in 1960, it was weak. Proportions of households owning radios (not available for the earlier years) was the better predictor of enrollments in 1960.

Determinants of "Resistance" to Diffusion of Schooling; the Model

Considerations that influence people in deciding whether to send their children to school--positive and negative components of resistance--have been anticipated in previous pages. However, there has been no attempt to lay out systematically a model of the factors that determine given communication how readily innovative behavior will be adopted or imitated.

A human-investment decision model that can be used to study what Hägerstrand calls "resistancies" is portrayed in Figure 33. Enrollment rate is the dependent variable: it is an investment indicator and measures diffusion

TABLE 51

ILLUSTRATIVE CORRELATIONS OF ENROLLMENT RATES AND CHILD LITERACY WITH SELECTED VARIABLES, 1930 to 1940

	Enrollment Rates, Age 6-14		Literacy of Children Age 10-14			
	1930	1937	1930		1940	
			M	F	M	F
Enrollment rates						
1930	....	.596	.912	.744	.762	.700
1937	.596	....	.703	.702	.775	.787
Percentages literate						
Males 40+, 1940	....	.728	.920	.912	.939	.925
Females 40+, 1940	....	.695	.819	.915	.892	.942
Proportion of males employed in						
White-collar jobs, 1940	.680	.713	.821	.828	.889	.904
Agriculture, 1930	....	-.483	....	....	....	....
Agriculture, 1940	-.619	-.490	-.784	-.790	-.816	-.846
Proportion of females 10+ economically active, 1940	.288	.350	.296	.383	.365	.413
Proportion of males barefoot, 1940	....	-.349	-.502	-.709	-.577	-.671
Urbanization						
Proportions 2,500+, 1930	....	....	....	....	....	....
Proportions 2,500+, 1940	.631	.339	.731	.736	.736	.748
Urban 1960/1930	.407	.593	.414	.581	.505	.473
Proportions of in-migrants, 1940	.554	.710	.648	.716	.714	.743
Movies, 1940	.636	.623	.756	.774	.831	.833

of the innovation, going to school.[1] (Again rectangles are concepts and rounded boxes represent independent variables observed.) The two attached rectangles to the left refer to costs of schooling: costs in the earnings that are foregone with attendance at school and direct outlays. The far-right rectangle represents visible economic returns to schooling, such as the improvement in job opportunities and earnings associated with acquiring an education. The rectangle at the bottom represents attitudes and values as these affect behavior, including preferences relating to schooling as a consumer value, along with "tastes for leisure," and strength of preferences relating to more narrowly defined expected economic costs and returns. A fourth rectangle specifies constraints on ability to pay: the total resources on which the individual (or family or local community) may draw in deciding what resources to put into education. A fifth rectangle might have been included to represent information, which was at the center of the first diagram. However, it is more appropriate to think of the information field as in another dimension, through which perceptions of the parameters relevant to the enrollment decisions are carried, screened out, or magnified. Intensities, directions, and contents of information are in turn altered by feed-back from behavior and experience.

The independent variables include two that were in the previous information-field diagram (Figure 32): education of adults and proportions of adults going barefoot. In Figure 33, these are both shown as proxies for the concept-box of attitudes and values. The barefoot variable doubles also as an indicator of ability to pay. This illustrates the fact that empirical measurements of societal characteristics using geographic units of observation are almost inherently multiple in meaning. As a careful examination of Figure 33 shows, there are multiple elements in the interpretation of most of the other variables as well.

---

[1] Instead the dependent variable could be some other indicator, such as persistence in school beyond the third year.

Despite this use of key variables as stand-ins for several things, direct cost of schooling was not represented by any variable. For elementary school such costs are small; moreover, available data do not allow one to identify or infer inter-area differences in such costs very dependably. Interpreting the model in terms of individual decision-making, availability of schools might have been inserted in the direct-cost rectanglo. This would point up the fact that where local facilities are missing or are too few for the applicants, there will be sharp and large shifts in direct costs to those individuals or families that seek schooling despite failure in crowding through the narrow entry gates. However, this special case is already covered conceptually by the more general concept of direct cost. If a community or aggregative view of decisions is taken, which is the statistical implication of using data for geographic areas as a whole, availability of school places is no longer an indicator of costs. Local availability is itself a function of local pressures for schooling, and a satisfactory measure of it would be very closely correlated with enrollments by definition. A related but different empirical variable is "proportion of elementary schools lacking the full range of six grades." This variable was not used in the multiple regressions, however. For that purpose it would have quite ambiguous meanings, since it may be as much an indicator of pace of expansion as of limited availability, and it is highly sensitive to short-run idiosyncratic influences.

Far more important on the cost side are opportunities for employment of children and the costs in foregone income that such opportunities produce. Though children legally are not to be employed, child employment is widespread enough for the census to tabulate the 8-11 year olds separately in data on the economically active population.

The zero-order relationships selected for summary presentation in Tables 50 and 51 are, of course, reflectors of both information-field and resistance aspects of the diffusion of schooling, which are intercorrelated in state-by-state observations. However, in directing attention to the resistance aspects of the model, special interest is focused upon variables that may serve as indicators of area differentials in visible returns to schooling, ability to pay for it, and the costs of its acquisition. Especially interesting in this connection are the income and white-collar indicators and those relating to employment of young children. The strength of this last variable in all the 1960 zero-order relationships, with the partial exception of urban enrollment rates, has already been noted.

The occupation variables (proportions in white-collar jobs and in agriculture) generally came through stronger for the earlier years than for 1960 on the all-state enrollment and child-literacy rates, and the 1960 all-state predictions were in turn very much better than those for urban or rural rates taken separately. In fact occupation structures in themselves told almost nothing about 1940 urban enrollments, though occupation variables came through as well on urban as on rural continuation rates (both around .450) and retardation rates (both around .650). Income in agriculture as well as in manufacturing displays a modest association with 1960 urban enrollments; but in the rural settings the only "economic" indicator that shows a high zero-order relationship is on the cost rather than the visible-benefits side; this is the negative correlation (-.571) for child employment, which will be discussed again later.

The Multiple Regressions

The interplay among the various traits measured in this study as explanations of patterns in diffusion of schooling is complex. Detailed intensive study of numerous zero-order correlations together with identification of absolute values and their shifts through time can provide an important part of the picture, but such detail is not easily summarized, and some simple correlations are misleading. Relationships among the variables has been further elucidated by the use of components analysis, which identifies clusters of traits that have important elements in common. However, the main concern of the present chapter is with the determination of particular dependent variables--in this instance primarily school enrollment rates--by means of multiple regressions.

The dependent variables are four: enrollment rates for entire states in 1937 and in 1960 and urban and rural rates in 1960. In view of the fact that correlations between enrollment rates for boys and girls are extremely high, little should be lost in failure to differentiate by sex. The independent variables were selected on the basis of the theoretical framework outlined in Figures 32 and 33, taking into account the components analyses. Where two or more good candidates for inclusion as independent variables had loadings exceeding .800 on the same factor, only one of these was included in any single regression equation. The regression program eliminated automatically any variables that had F values less than 1.0 in a particular trial equation. The results are summarized in Tables 52 through 55. The median state values and the simple correlation coefficients are shown in the first two columns. The medians present a better clue to the relevant development levels than would be provided by the mean values coming out of the regressions, since the latter are in various transforms of the initial indicators. Independent variables that were thrown out by the F value cut-off are indicated by an entry of "d" for each of the equations with which they were tried.[1] The Federal District was omitted in all the regressions. Values for the District were then computed from each of the equations and compared with the observed enrollment rates. The results of these prediction tests, shown in Table 56, will be discussed at the end of this chapter.

The regressions for enrollment rates in 1937 are by far the most successful if the criterion of success is the proportion of variance in enrollment rates that is explained. This is what by now might have been expected, not only on the basis of the zero-order correlations with enrollment rates, but also the generally higher associations between literacy measures and other socio-economic indicators a generation ago. (It will be remembered that the reverse was the case for associations involving schooling of adults beyond primary levels, but that is another matter.) The maximum R^2 in Table 52, explaining 70 per cent of the variance in 1937 all-state enrollment rates, was obtained from equation 1.5. That equation included literacy of older females, males barefoot, males in white-collar jobs, and males in agriculture. However, equation 1.1 was the more efficient statistically; literacy of males aged 40 or more, males in white-collar jobs, and males in agriculture jointly yield an R^2 of .688.

---

[1] Variables dropped by the F test in trial runs that left only one independent variable in the regression are identified separately. In view of the transformations that were used to convert variables into more nearly normal form before entering them in the regressions, the regression coefficients are awkward to interpret and are not included in Tables 52 through 55. The equations and forms of the variables are given in Appendix C, however. In all cases N is 31.

TABLE 52

MULTIPLE REGRESSION ANALYSIS, SET 1 DEPENDENT VARIABLE: ENROLLMENT RATE, 1937 T

		Median Values	Simple Correlations	Equation Numbers:	(1.1)	(1.2)	(1.3
				R^2	.688**	.607**	.605**
				F	19.87	21.63	13.77
				Zero-order F			
Dependent variable							
265	Enrol 6-14 T 1937	51.7					
Independent variables							
145	Literacy 40+ M 1940	48.2	.728	32.77**	.454	....	.594**
146	Literacy 40+ F 1940	37.8	.695	27.09**	....	....	....
125	Barefoot M 1940	9.0	-.349	3.91	....	....	....
64	Collar/EcAct M 1940	4.2	.713	30.07**	.507*	.695**	....
79	Ag/EcAct M 1940[a]	75.0	-.490	9.17**	.553*	.447*	.381
58	EcAct F/10+ 1940	1.4	.350	4.05	....	....	....
39	Movies/Pop. 1940	2.9	.623	18.43**	....	....	.241
46	F under 5/F 1940	14.4	.070	.....	....	....	....

Equations tried and reduced to one independent variable by the F test: When variable (79) is in: (125) and (58) dropped; when variable (39) is in: (79) dropped.

*Significant at the .05 level of probability.

**Significant at the .01 level of probability.

TABLE 52--Continued

(1.4)	(1.5)	(1.6)	(1.7)	(1.8)	(1.9)	(1.10)	(1.11)
.580**	.705**	.691**	.668**	.649**	.619**	.596**	.527**
19.36	15.51	14.55	13.09	16.67	14.62	20.66	15.62
Partial Correlation Coefficients							
.669**	....	....	....	....	....	....	....
....	.467	.723**	.675**	.733**	.650**	.735**	.615**
d	.243	.435	.470	.508*	....	.468*	....
....	.397	....	....	....	....	d	....
.326	.515	.279	.413	.364	.196	....	.293
....	d	....	d	d	....	d	d
....	d	d	.231	....	....	....	....
....	....	.345	....	....	.441	....	....

[a] Because of its marked negative skew, this variable was used in the general form Log (100-x). All signs have been reversed, however, to facilitate interpretation of the table. The partial correlation coefficients consistently carried signs the opposite of the simple correlation; this is not a transposing error.

[d] Deleted by the F test.

The most interesting features of these regressions, however, are in the details, the ways in which particular variables perform in diverse combinations with others and how they diverge from their own zero order performance. Equation 1.8 is a good starting point. In that equation the coefficient for female literacy has been raised slightly, from a zero-order value of .695 to a partial correlation coefficient of .733, just above the zero-order value on literacy of older males. This is not particularly surprising. What is striking is the reversal of signs on the coefficients for both proportions of males in agriculture and, especially, proportions of males barefoot. In a zero-order correlation with 1937 enrollment rates, these variables carried the negative values of -.490 and -.349 respectively, whereas the former is now a positive .364 and the latter (barefoot) a significant positive .508. In fact both of these variables carry positive signs in all equations in which they appear with literacy of either males or females age 40 or over. However, the barefoot variable is dropped by the F test when male literacy is substituted for female (compare equation 1.4 with equation 1.8),[1] which implies a much greater overlap between the male literacy and proportions barefoot than the female literacy and (again male) proportions barefoot in their associations with enrollment of children in primary schools.[2] Inclusion of the agricultural employment and barefoot variables has no effect on the coefficients for female literacy.

One of the most interesting things that these equations tell us is that back in the late 1930's the larger the indigenous populations (proportions barefoot) for any given literacy rates in the older generation, or among older women in particular, the greater was the propensity to send children to school. These results reflect a feature of the complexity of socio-economic patterns that showed up in the components analysis for some of the factors emerging at the third round or later for Matrices C and D, reflected, as an example, in the last map of Chapter V (Figure 28).

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[1] It is also dropped when put in an equation with agricultural employment only.

[2] The zero-order correlations for males as against females do not show this, however. They are as follows: Barefoot M 1940 with Lit. 40+ M 1940 and Lit. 40+ F 1940 coefficients are -.626 and -.796 respectively. The corresponding correlations with Ag./EcAct M 1940 are -.839 for the male and -.860 for the female literacy variables.

Equation 1.5 differs from equation 1.8 only in adding proportions of males in white-collar employment, which is the only variable that cuts female literacy down below a .05 significance level. White-collar employment survived the F test in equation 1.5 at a positive modest level, to signal the effects of visible returns to schooling. While such returns are reflected indirectly in some of the other variables as well, the reversals of signs on the agriculture and barefoot variables and the relative strength of that for female literacy might seem to underline the great importance of information fields and cultural attitudes in the early diffusion of primary schooling.[1] The high zero-order correlation with white-collar proportions (.713) and the characteristics of equation 1.1 warn against overstressing this inference, however. In equation 1.1 male literacy was substituted for female and the barefoot variables was not included. The highest partial correlation coefficients in this case are on the male occupations, that for white-collar proportions being somewhat the more significant; also, the white-collar measure retains its zero-order positive sign, whereas the coefficient for proportion of males in agriculture is again reversed, from a negative zero-order to a positive partial correlation coefficient. Given the nature of these occupation variables, equation 1.1 suggests that for any given literacy rate among adult males the lowest enrollment rates of children will be found where there are the largest proportions of non-agricultural laborers, self-employed artisans, and hucksters--the unlanded poor in the more densely settled districts with their many small towns. This is also where child employment is high. Given earlier settlement patterns, the changes in Mexican agriculture since 1940 and the over-all advance in diffusion of primary schooling, one should not necessarily expect a repetition of the 1940 relationships in 1960.

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[1] Ethnically and geographically differential effects of early activities of the cultural missions are undoubtedly part of this picture.

Before turning to the regressions for 1960, a brief comment on the performance of the variable for movie attendance in the 1937 regressions is in order. By itself that variable was significant at the .01 level, and it knocked out the variable for males employed in agriculture when the two variables were paired. It survived the F test in equation 1.7, though at a low level, in partnership with female literacy, proportions in agriculture, and proportions barefoot, though proportions of females economically active dropped out. However, it did not survive in this combination when the competition for inclusion was with white-collar employment, on the one hand (1.5), or even when the competitor was the proxy for fertility rates (in equation 1.6), on the other. Again, there are serious problems of multi-collinearity that are unavoidable in working with these data. Also, certainly measures lack the precision needed to discriminate definitely between densities of face-to-face and formal communications. However, the nature of the selectivity of survival of the 1940 movie attendance variable reflects not only the fact that it picks up a wide range of related socio-economic differentials among areas and that it has a corresponding lack of precision as an indicator of economic level (vis-a-vis the 1940 white-collar variable), but also that it fails to separate out degree of informal face-to-face involvement in local-traditional versus national information fields. Among other things, in brief, it tells less about what Hägerstrand would call the "private" than about the "public" information fields, and loses its force as a communication measure accordingly.

The regression equations taking 1960 enrollments for total state populations as the dependent variable (Table 53) were set up to provide as close a match with those for the earlier period as possible. The fact that the zero-order correlations are generally weaker has been noted in several contexts, and the multiple regressions were correspondingly less successful in explaining variance of enrollments.[1] The same five variables that were significant in one or more of the 1937 multiple regressions survived the F cut-off in one or more of the 1960 regressins, but with some decided changes in the ways in which they made their appearance. Proportions of males engaged in agriculture in 1960 dropped out of the 1960 regressions wherever either literacy of older males or proportions of men in white-collar employment was included in an equation. On the other hand, whereas proportions of males barefoot had dropped out of the 1940 regressions when male literacy was included, they retain a place beside male literacy in the 1960 regressions, and again with positive coefficients.

Whether they refer to 1937 or to 1960, analyses of determinants of enrollment rates for total state populations are confounded by the various weightings of urban and rural people that are involved. Although this very fact increases the proportion of inter-state variance that is statistically explained by the available data, it also clouds the picture of the processes at work. Fortunately, for 1960 we can distinguish between urban and rural enrollment rates (Tables 54 and 55). The urban analyses are considered first.

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[1] This cannot be attributed to the transposed form of the dependent variable, since it prevailed throughout in correlations involving literacy variables as well, regardless of the forms in which they were entered.

TABLE 53

MULTIPLE REGRESSION ANALYSIS, SET 2 DEPENDENT VARIABLE: ENROLLMENT RATE, 1960 T

		Median Values	Simple Corre-lations	Equation Numbers:	(2.1)	(2.2)	(2.3)	(2.4)
				R^2	.536**	.522**	.508**	.380**
				F	10.39	15.30	9.31	8.58
				Zero-order F				
					Partial Correlation Coefficients			
Dependent variable								
266	Enrol 6-14 T 1960[a]	59.2						
Independent variables								
147	Literacy 40+ M 1960	63.0	.625	18.60**	....	.714**	....	....
148	Literacy 40+ F 1960	52.8	.513	10.34**	.460	....	.455	....
127	Barefoot M 1960[a]	4.3	-.156	.....	.549*	.464*	.506*	.288
65	Collar/EcAct M 1960	12.7	.568	13.84**	.432	....	....	....
80	Ag/EcAct M 1960[a]	67.7	-.569	13.89**	d	d	-.372	-.604**
59	EcAct F 12+ 1960	4.9	.213	1.38	d	....	d	....
40	Movies/Pop. 1960	4.6	.475	8.44**	d	....	d	....
47	F under 5/F 1960	6.7	.125	.....	....	....	d	....

Equations tried and reduced to one variable by the F test: When variable (147) is in: (65), (80), and (40) dropped separately and jointly. When variable (80) is in: (148), (65), (59), (40), and (47) dropped separately and jointly. (Note equation 2.3, however.)

[a] Because of its marked negative skew, the dependent variable (266) was used in the form log (100-x); to facilitate the interpretation of this table, all signs have therefore been reversed with the exception of those for variables (127) and (80). Variable (80) was in the form log (100-x) and variable (127), which has an extreme positive skew in its raw form, was put into the regression as a rank variable with rank 1 for the highest proportion barefoot.

[d] Deleted by the F test.

*Significant at the .05 level of probability. **Significant at the .01 level of probability.

TABLE 54

MULTIPLE REGRESSION ANALYSIS, SET 3 DEPENDENT VARIABLE: URBAN ENROLIMENT, 1960

		Median Value	Simple Correlation	Equation Numbers:	(3.1)	(3.2)	(3.3)
				R^2	.473**	.264*	.408**
				F	12.57	5.02	9.64
				Zero-order F			
Independent variables							
273	Enrol 6-14 U 1960	58.7					
168	Lit. 40-49 MU 1960	80.0	.385	5.06*	....	.514	....
176	Lit. 40-49 FU 1960[a]	71.5	.445	7.16*	.688**	....	.630**
127	Barefoot M 1960[a]	4.3	.004	0.02	.586**	.368	....
62	Employ 8-11 M 1960	24.1	-.315	3.19	....	....	....
65	Collar/EcAct M 1960	12.7	.125	....	....	....	....
59	EcAct F.12+ 1960	4.9	.228	1.60	....	....	....
45	Single F 20-24 1960	32.1	.159	1.71	....	....	....
103	Mfg Inc. over 500, 1960	38.1	.404	5.67*	....	.....	....
9	Capital/urban 1960	28.1	.332	3.58	....	....	....
12	Pop. 50,000+ 1960	14.3	-.132	....	....	....	-.512*
17	In-migrant 1960	10.6	-.016	....	....	....	....
44	Radio 1960	24.3	.157	....	.....	....	....

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[a] Because of its marked negative skew, variable (176) was used in the form log (100-x). Variable (127) was entered by rank, with the highest proportion barefoot as rank 1. Signs for these variables have therefore been reversed to facilitate interpretation.

[d] Deleted by the F test.

TABLE 54--Continued

(3.4)	(3.5)	(3.6)	(3.7)	(3.8)	(3.9)	(3.10)	(3.11)
.322**	.441**	.289*	.248*	.196*	.181	.187	.152
6.66	7.09	3.67	4.63	3.42	3.09	2.06	2.52
.557**	....	....	....	.390	.410	....	....
....	....	....	....	....	....	....	....
....	....	....	....	....	....	-.201	....
....	....	....	....	....	....	-.284	-.218
....	-.311	-.373	-.318	....	-.195	....	....
....	....	....	d	.237	....	....	....
....	....	.234	....	....	....	....	....
....	.651**	.516*	.486*	....	....	....	....
....	....	....	....	....	....	.254	.243
-.452*	....	....	....	....	....	....	....
....	-.506	....	....	....	....	....	....
....	....	....	....	....	....	....	....

Tried and dropped by F test:

When variable (168) is in: (62) (44) (9).
When variable (176) is in: (62) (44) (9).
When variable (103) is in: (59).
When variable (59) is in: (65) (17) (45).
When variable (45) is in: (65) (17).
When variable (9) is in: (127) (44) (12) (65).
When variable (62) is in: (65) (44).

That high levels of income for employees in manufacture was one of the most successful predictors of 1960 urban enrollments in a zero-order correlation was shown by the data of Table 50, even though the coefficient was only .404. This variable comes through much more strongly when it is introduced into a multiple regression with other relevant variables. In fact when it is combined with proportions of males in white-collar employment and proportions of in-migrants, the partial correlation coefficient on manufacturing income is a strongly positive .651. This index of ability to pay for education, and probably of visibility of economic returns from education, was much more important among urban populations than the levels of employment of children. The latter were dropped in most trials by the F test cut-off, surviving at a low level only, alone or in combination with Capital/urban, Barefoot M 1960, or EcAct F 12+ 1960, all in weak regression equations,[1] none of which gave multiple correlations significant at the .05 level.

The negative signs of the partial coefficients for males in white-collar employment and for in-migration in equation 3.5 both call for special comment. In the zero-order relationships, the coefficients for these variables were virtually zero (.125 and -.016 respectively). Controlling for incomes in manufacturing, both become significantly negative partial coefficients (-.311 and -.506). This equation distinguishes types of urban places very clearly, thereby sharpening the independent variables and their meanings. "White-collar employment" is a very heterogeneous designation, and alone it may be a poor indicator of the character of a local economy. However, when controlling for incomes in manufacturing and for the proportions of the state population who are in-migrants, the proportion in white-collar employment becomes a more explicit indicator. The fact that in this case it carries a negative sign is almost certainly indicative of the depressing effect on enrollment rates of a large proportion of men engaged in either trade or local bureaucratic employment relative to the degree of progress or lag in the modernization of industry and to the proportions of urban newcomers. (It should be remembered that the Federal District is not in these regressions.) The stronger effect of the in-migration coefficient adds substantial clarification to this picture of kinds of urban places and of how contrasts among them may affect primary-school enrollments. The evidence of a continuing drag of in-migration on the diffusion of primary schooling is unambiguous. Indeed, given the limitations inherent in the gross units of observation available, equation 3.5 provides a very clear picture of the operation of information fields, ability to pay, and visible returns on decisions to attend primary school. These crude measures explained 44 per cent of the inter-state variance in urban enrollment rates.

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[1] In addition to equations (3.10) and (3.11), Employ 8-11 M 1960 appeared with a negative coefficient of -.288 in combination with EcAct F 12+ 1960 (coefficient .187) and with a coefficient of -.361 in combination with Barefoot M 1960 (coefficient -.186).

Along with income in manufacturing, the best zero-order predictors of urban enrollment rates were the literacy rates of men and women in their forties, with coefficients of .385 and .445 respectively. This is hardly surprising, except that these correlations might have been expected to be higher, as indeed they were a generation ago. The first inclination of most sociologists is to interpret inter-generation correlations of this kind as indicative of the importance of attitudes toward schooling that are distinct from or outside of economic considerations. However, empirical observations of data for geographic units never provide such easy answers. The proportion of an area's adults who are literate (or have attained any given level of schooling) may be proxies for almost any of the components in the models of Figures 32 and 33 (with the partial exception of foregone earnings). Adult educational attainments pick up geographically associated aspects of ability to pay, visibility of returns, attitudes, and participation in wider information fields. Nevertheless, the contributions of measures of adult literacy were raised by combining them with either Barefoot M 1960 or Pop 50,000+ 1960.

In the urban setting it was literacy of older females rather than of males that came through most clearly. In fact the best equation so far as explanation of variance is concerned (equation 3.1 with an R^2 of .473) contained the two independent variables female literacy and males barefoot, with partial coefficients of .688 and .586 respectively. The incidence of literacy among women in their forties, still distinguishes urban populations that have been established as leaders in modernization from the general run of urban places, thereby picking up some of the same traits that are associated with higher versus lower incomes of employees in manufacture and the modern versus traditional types of white-collar activities. The tendency for the literacy variables to eliminate other variables because of major overlap with them must serve as a warning against a research procedure that stops with finding the highest R^2, and that gives theoretically better-specified variables no further chance to demonstrate their validity once they have been eliminated by F tests in an equation that includes a variable with multiple theoretical connotations. Equation 3.3 also presents a warning; given the small number of observations and the particular characteristics of the Mexican states in which the urban populations are most concentrated, the high negative coefficient of -.512 on proportions in cities of 50,000 or more may be in large measure a proxy for the more meaningful in-migration variable of equation 3.5. It would be fallacious to generalize on the basis of equation 3.3 taken alone.

Child employment was placed centrally in the diagram on resistance (Figure 33) because of its logically key place in schooling decisions. Yet this variable had only a moderate zero-order correlation of -.315 with urban enrollment rates, and as was noted earlier, it faded out in the urban multiple regressions. These facts cannot be dismissed solely on the ground that the child employment measures refers to entire state populations and fails to discriminate among urban settings. By 1960, there can be no doubt that the relative economic importance of foregone earnings of urban children under 12 years of age had declined. Whether foregone earnings play an important part in continuation rates and in schooling beyond the primary years is not here in question. Carnoy's study is decidedly pertinent, however. He made no estimates of proportions of urban children employed, but in a small survey of earnings among working children he found that employed children earned substantially more in the cities he studied than in the rural localities. For urban families foregone earnings are a substantial cost in the last years of elementary school. Nevertheless, even taking these foregone earnings into account, Carnoy estimated urban rates of return to investment in the fourth to sixth years of primary school to run 30 or even 40 per cent.[1] His finding is consistent with these regressions. Despite high opportunity costs, relatively fewer children are employed in Mexico's cities than in rural areas, and rates of child employment fail to explain differences in urban enrollment rates precisely because other factors dominate: visibility of returns to schooling, high parental incomes, parental education, and participation in modern culture versus many unassimilated in-migrants living in the poorer residential areas of cities.

In rural areas returns to schooling are less visible, ability to pay is generally lower, and there is less variation in these traits. There the opportunity for child employment plays a pervasive part in determining school enrollment; in fact the eleventh factor of Matrix A centers on enrollment of youth in rural areas (loading of -.615) and employment of boys age 8 to 11 (loading of .590). The geographic pattern is shown in Figure 34.

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[1] Carnoy, op. cit.

While the employment opportunities open to children cannot be measured directly from the available data, the uses people make of those opportunities and the correlates of that use can be studied. The data indicate that the extent of opportunities and of their utilization in rural areas are greatest where there are moderate proportions of males in agriculture, low incomes in manufacturing, and many small traders (indicated by high white-collar but low clerical proportions). In the set of multiple regressions for 1960 rural enrollments (Table 55), the child-employment variable comes through strongly every time it is given a chance. All other variables, including literacy of rural males (age 40-49) were eliminated by the F test when included with the exceptions shown: proportions of males barefoot in 1960 (.536 in equation 4.1); agricultural incomes over 500 pesos (.305 in equation 4.2); literacy of rural females (-.270 in equation 4.3); ownerships of radios (-.223 in equation 4.4), and proportions of the urban population living in the capital city 1960 (-.200 in equation 4.5). Furthermore, with the exception of the barefoot measure, none of these was significant, and all had signs that reversed their zero-order coefficients. Although the zero-order coefficient for proportions barefoot was only .112, it came through significant at the .01 level when combined with male literacy (equation 4.6) as well as in combination with child employment. The rural enrollment pattern is revealed as very clearly a function of foregone earnings and cultural attitudes.

Federal District Enrollment Prediction Tests

Throughout this study, the Federal District has been analyzed part from the other states of the country. On many indices of development it stands at the

Fig. 34.--Matrix A, Factor 11.

Variable Number		Factor Loadings (±.800 and Above)
274	Enrollment 6-14 rural 1960	-.615
62	Employment 8-11 males 1960	.590

A short-cut estimate of the rank of the Federal District for these variables is 32 (from a high of 1 to 32).

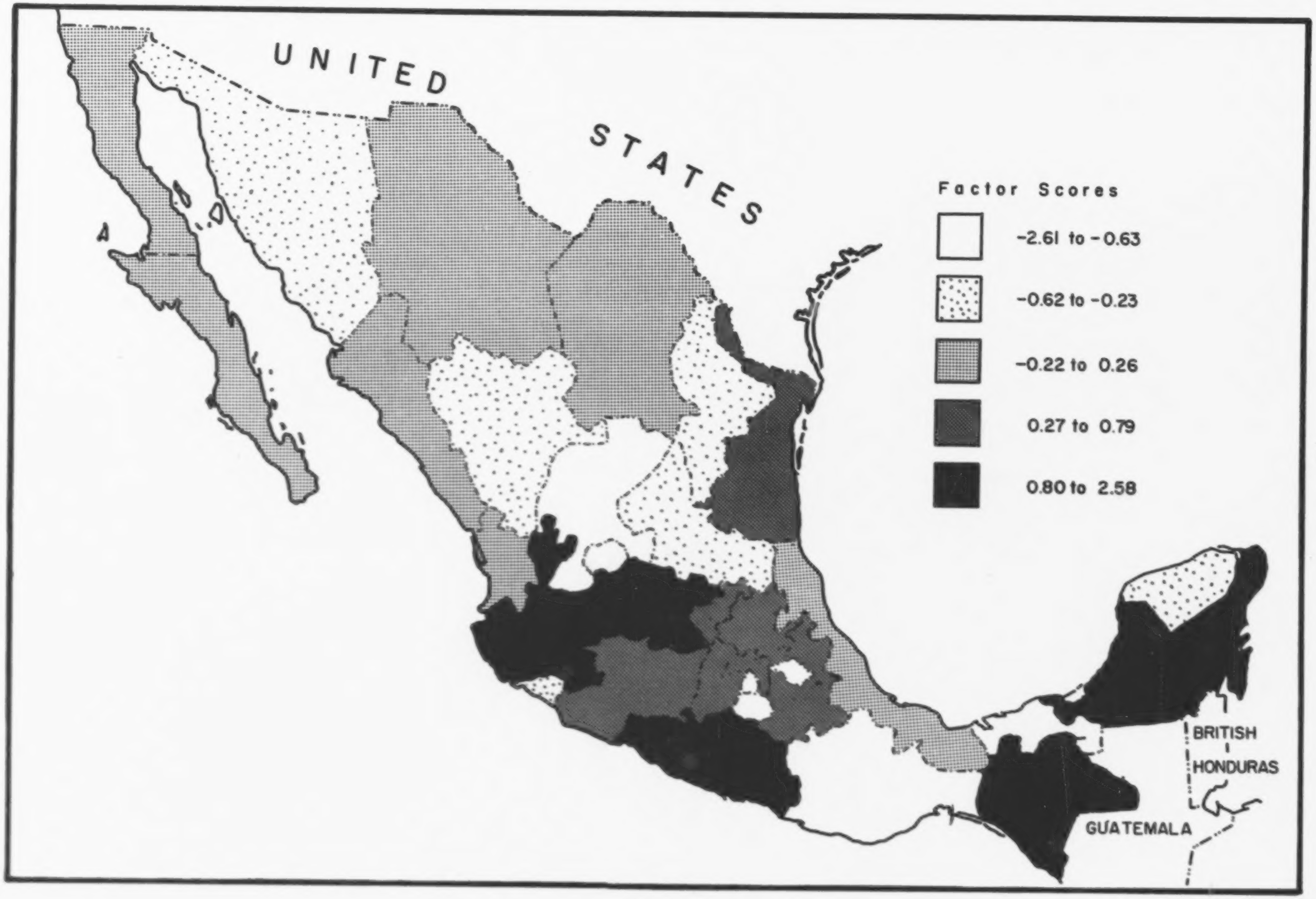
UNITED STATES
Factor Scores
-2.61 to -0.63
-0.62 to -0.23
-0.22 to 0.26
0.27 to 0.79
0.80 to 2.58
BRITISH HONDURAS
GUATEMALA

TABLE 55

MULTIPLE REGRESSION ANALYSIS, SET 4 DEPENDENT VARIABLE: RURAL ENROLLMENT, 1960

		Median Values	Simple Corre-lations	Equation Numbers:	(4.1)	(4.2)	(4.3)	(4.4)	(4.5)	(4.6)	(4.7)
				R^2	.520**	.389**	.376**	.360**	.353**	.404**	.232*
				F	15.17	8.92	8.42	7.87	7.65	9.48	4.23
				Zero-order F							
	Enrollment 6-14 R 1960		1.000								
184	Lit. 40-49 MR 1960	60.5	.490	9.14**						.629**	
192	Lit. 40-49 FR 1960	45.5	.239	1.75			-.270				.471*
127	Barefoot M 1960[a]	4.3	.112	- .39	.536**					.465*	.431*
62	Employ 8-11 M 1960	24.1	-.571	14.05**	-.717**	-.608**	-.581**	-.561**	-.593**		
80	Ag/EcAct M 1960	67.7	-.338	3.73							
84	Ag. Labor/Ag. M 1960	50.6	.162	....		d					
89	Farm mechanized 1950	1.6	.237	1.72		d			d		
91	Ag. income over 500	9.0	.176	....		-.305				d	
9	Capital/urban 1960	28.1	.060	....					-.200		
12	Pop. 50,000+ 1960	14.3	.009	....							
44	Radio 1960	24.3	.257	2.05				-.223			

Equations tried and dropped by F test: When variable (80) is in: (84); when variable (184) is in: (84), (89) (91) (44) (9); when variable (192 is in: (91); when variable (89) is in: (127) (94) (91) (9) (12); when variable (62) is in: (80) (84) (89).

[a] Signs have been reversed to facilitate interpretation since this variable was entered in the regressions as a rank variable with the highest proportions barefoot as rank 1.

[d] Deleted by the F test.

*Significant at the .05 level of probability. **Significant at the .01 level of probability.

apex of modernization. It is the focal point from which change and ideas diffuse at a varying pace throughout the country. It has direct lines of communication with foreign centers and with the regional capitals: Monterrey, Guadalajara, Puebla, and Oaxaca. In 1960, the Federal District accounted for over 20 per cent of the total urban population. It contains the chief industrial complex of the nation. Out of the 7,000 industrial establishments beginning operations from January, 1960 to June, 1960, 4,000 were in the Federal District.[1]

Because of the extreme values for this area on most measures of modernization, it was listed separately in tables showing distributions of traits, and it was omitted from the simple correlations, the components, and the regression analyses. It was feared that otherwise its extreme values might distort the relationships among variables. However, the question remains as to how well the Federal District fits the patterns revealed by the other states. The values for the Federal District on independent variables were put into the regression equations to see how closely its enrollment rates would be predicted. The results, for a selection of the best equations, are given in Table 56. These are presented in three forms. The first column, headed $(X_p-X_o)/S$, is the value predicted by the equation minus the observed value divided by the standard error of the regression. The second measure expressed the predicted enrollment rates as ratios to the observed rates for the Federal District. The third measure gives the absolute differences between the predicted and observed values. The second two columns are designated as Z_p/Z_o and Z_p-Z_o respectively instead of using the letter X because in the case of total enrollments for 1960 the form of the dependent variable in the regression equations was log (1,000 - 10Z),

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[1] Thompson, *op. cit.*, p. 99.

TABLE 56

FEDERAL DISTRICT ENROLLMENT PREDICTION TESTS

	$\frac{X_p-X_o}{S}$	Z_p/Z_o	Z_p-Z_o	Description of Equations by Order of F Value on Partial Correlations and by Signs of Regression Coefficients			
Dependent variable: Enrollment 1937 T							
Equation (1.1)	1.102	1.3	31.0	+ Ag M/Ect 1940	+ Collar M 1940	+ Lit 40+ M 1940	
Equation (1.5)	.563	1.2	14.6	+ Ag M/Ect 1940	+ Lit 40+ F 1940	+ Collar M 1940	+ Bare M 1940
Equation (1.8)	.301	1.1	8.1	+ Lit 40+ 1940	+ Bare M 1940	+ Ag M/Ect 1940	
	.870	1.3	28.7	+ Lit 40+ M 1940			
	1.359	1.5	49.8	+ Collar M 1940			
Dependent variable: Enrollment 1960 T							
Equation (2.1)	- .332	.985	- 1.3	- Bare M 1960	+ Lit 40+ F 1960	+ Collar M 1960	
Equation (2.2)	-1.265	.936	- 5.4	+ Lit 40+ M 1960	- Bare M 1960		
Equation (2.3)	-1.516	.916	- 7.0	- Bare M 1960	+ Lit 40+ F 1960	- Ag M/Ect 1960	
	- .662	.963	- 3.1	+ Collar M 1960			
	-1.094	.938	- 5.2	+ Lit 40+ M 1960			
	-1.795	.875	-10.6	+ Lit 40+ F 1960			
Dependent variable: Urban enrollment, 1960							
Equation (3.1)	-1.025	.8359	-10.3	+ Lit 40-49 FU 1960	- Bare M 1960		
Equation (3.3)	-1.373	.7675	-14.6	+ Lit 40-49 FU 1960	+ Urb 50,000,'60		
Equation (3.5)	-1.632	.7261	-17.2	+ Mfg Inc 500+ 1960	- In-mig. 1960	- Collar M 1960	

where Z is the enrollment percentage. Also, to make the results comparable the signs in the first column were, of course, reversed for the set 2 regressions, since they would otherwise refer to proportions not enrolled instead of proportions enrolled.

Because the regression equations of sets 1, 3, and 4 put no contraints on the upper or lower limits of predicted values, it was, of course, possible for these to exceed 100 per cent or to fall below zero. This happens for predictions from set 1. The results are shown in Table 56. Convincing evidence is provided that around 1940 the Federal District's concentration of white-collar men was grossly out of line with other traits. So, in lesser degree, were the District's reported rates on adult male literacy. These facts are reflected in the large discrepancies associated especially with equation 1.1 and with the predictions from white-collar proportions only.

By 1960, things had changed substantially. Also, fortunately, the data in general and for the Federal District in particular are better. In addition the dependent variable for Enrollments 1960 T was in a form that precludes predictions exceeding 100 per cent. All of the 1960 equations pertaining to state totals in enrollment rates under-estimate the rate in the Federal District, but equation 2.1 comes extremely close.[1] So, for that matter, does white-collar proportions taken alone. On the other hand, female literacy by itself or in any combination that does not include proportions in white-collar employment leads to substantial under-estimation of 1960 enrollment rates in the Federal District as a whole. The under-estimates in the regressions for 1960 urban enrollments are much larger, primarily because they fail to give the positive weight to proportions white-collar that would tend to pull the estimates for the Federal District more nearly into line. By the same token, the distinctive role of the Federal District as a communication node is inadequately reflected in the urban enrollment equations. It is interesting in this connection that the best urban prediction for the Federal District was the equation that combined proportions barefoot and urban female literacy, despite the fact that the latter variable tended to produce underestimates of enrollments in the District as a whole. The fringe settlements on the edges of the city are relevant in this connection.

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[1] There is no reason why a priori the use of the change in the form of the dependent variable should have this effect, which is repeated in set 3 also.

A Summary Comment

In summary, the regression analyses support both Hägerstrand's emphasis on face-to-face "tellings" (as basic to the functioning of an information field) and the complementary economic-decision theory of investment in schooling (stressing the counterplay of opportunity costs and visible returns). Evidence supporting Hägerstrand's theme includes low correlations between urban and rural enrollment rates and low adult-literacy correlates in the central states. Even stronger is the support provided by the negative in-migration effect in the urban regressions: in contrast to Sweden, Mexico is a bi-cultural society that has recently been experiencing an upheaval of old geocultural patterns as subcultures move into new urban locations. The strength of the barefoot variable in all the 1960 regressions underlines this situation. Both the face-to-face communication argument and the economic-decision model find expression in the differential impacts of a diversity of urban "settings." Those range from the so-called "urban" that is only a rural crossroads gathering place to modern cities with visible returns to education and the ability to expand enrollments. On the cost side, the economic model is most dramatically supported in a rural setting, by the close correlations between diffusion of schools among rural populations and opportunities (and demands) for employment of children. Visible returns usually are too low to offset the inhibiting effects of foregone-income opportunities.

CHAPTER VII

SUMMARY AND CONCLUSIONS

Those societies that are composed of plural cultures are faced with the task of superimposing a commitment to national goals through the development of economic, cultural, and social ties within the nation. For many Latin American countries universal education through a free public school system was held to be an indispensible vehicle for achieving integration on a national level. Recently critics have begun to attack this ideal of the public primary schools as a dream--impossible to fulfill in view of past efforts and present problems, and based on the analogy of the United States experience that has little relevance for Latin America.[1]

The questions of relationships between schooling (whether formal or informal) and development has been approached in many different ways. The choice in this investigation has been to take a case in point, that of Mexico, and to present a sweeping panorama of interrelationships in the development process. Questions at the heart of the study have been concerned with development centers in a spatial context, and the sequences of change over time. In Chapters V and VI the focus was narrowed to concentrate on analysis of the determinants of patterns of diffusion of literacy and of primary schooling among rising generations.

Prior to this, Fattahipour, in a study of Iran, had used census data for small districts as source material. A much richer variety of data could be obtained for Mexico for individual states, enabling one to explore changes over the past three decades. On the other hand, data limitations were severe at the next lower level, of municipios, and at the same time the municipios are so many as to make full coverage for Mexico totally unfeasible. The choice between limited amounts of information for small geographic units over a narrowly circumscribed part of Mexico and much fuller information using the grosser observations for states was a relatively easy one at this stage. Clearly analysis of observations by states took priority, even though later research at the municipio level might well be rewarding. This decision was made in full awareness of the disadvantages of using data for geographic units as large as states, even when the concern is with ecological patterns. The heterogeneity of sub-areas within states blurs the relationships that can be observed. (Any use of geographic units of observation, large or small, will of course entail serious problems of multi-collinearity when results are interpreted as clues to determinants of individual behavior, a problem that must be kept in mind in any attempt to interpret the findings. In that context multiple regression coefficients will be spuriously high, even as partial correlation coefficients tend to be reduced.) Fortunately something of the internal geographic heterogeneity problem inherent in use of areas as large as states as the units of observation could be mitigated by use of measures that differentiated rural from urban residents and that distinguished by sex and age.

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[1] See, for example, Ivan Illich, "The Futility of Schooling in Latin America," Saturday Review, April 20, 1968, pp. 57 ff.

The theories of the Swedish cultural geographer, Hägerstrand, provided a rationale for the ecological study and incidental clues to ways of analyzing the data, even though the latter would not permit duplication of his refined micro-analysis. His construct of "information fields" in the patterning of interpersonal communications, on the one hand, of "resistance" to messages and to acceptance of innovations, on the other, formed the starting point for the model presented in Chapters V and VI. There communication and economic decision theory are joined to study the diffusion of children's education.

"Modernization" and its distribution in the Mexican context was identified in three factor matrices with only a few overlapping variables (plus a fourth containing only education items). In each case a first factor that clearly delineated relative progressiveness in one or another combination of degree of urbanization, economic levels and structure, educational attainments of the population, and cultural traits. In one matrix loadings were highest for males in white-collar work and for intermediate levels of adult schooling (rather than literacy). Another highlighted the importance of children's enrollment in primary school and the disappearance of the elements of traditional culture. Although one of the matrices included most of the change and the difference indexes, these were passed by in the first factor, which picked up the relatively few variables relating to occupational structures and schooling.

One of the factors that emerged in the components analysis had high positive loadings on persons walking barefoot, on differences between males and females in the acquisition of literacy, and on degree of difference between the younger and the older females with respect to proportions literate (in both rural and urban areas). These features characterize backward, predominantly rural states. Isolated groups become linked into centers of change only slowly.

By 1960, Mexico had reached a point at which well over half of the adult male population was literate. In fact the proportion in the median state was nearly two-thirds even among the older males--with a rural median just under that level and an urban median at 80 per cent. However, there was a very large range among states and particularly as among their rural parts. For older females, proportions literate were about ten points less than for males, with even bigger gaps in rural parts of states and in lagging states generally.

Inter-state ranges were larger than for males. Urban-rural somewhat exceeded male-female differences. While literacy had become more pervasive typically among the younger cohorts, the inter-state range in proportions literate was not appreciably lower among younger individuals. But in most respects, by 1960, Mexico clearly had a larger proportion of states well beyond the 40 to 50 per cent level of literacy than is often regarded as essential for development. As of the 1940 census, about half the literates had acquired their literacy outside of school; though this item was not repeated in later enumerations, there can be no doubt that by 1960 the proportions of literates without schooling was substantially smaller.

Nevertheless, Mexico can hardly be called a well-schooled society. In the median state nearly half the persons over age 30 have had no schooling, less than 5 per cent had gone beyond 6 years, and barely 2 per cent even of males received 10 or more years. For each of these indexes, again, inter-state contrasts are large--although even the top-ranking state (apart from the Federal District) can hardly be said to have more than a handul of individuals with more than working literacy.

The role of women was explored in several ways. Their participation in the society outside the home was clearly associated with degree of modernization. Fertility rates displayed the expected negative associations with indexes of economic advancement, but this is a Catholic country and with states as units the coefficients were quite moderate. The proportions of young-adult women who have remained unmarried showed associations of the opposite sign to those for fertility, and generally the coefficients were larger. Thus in states with more unmarried young women there were more adult women with schooling beyond primary, distinctly larger proportions of women in white-collar jobs, and somewhat larger participation by women in the labor force, generally. That the coefficients are larger for more-than-minimum schooling than for literacy testifies to the fact that as yet it is a rather small set of women who are sharing in modernization.

Relationships between the occupational structure and levels of literacy and schooling were expected to show negative associations with occupations. The states of Mexico are still preponderantly agricultural; in only a handful are less than half of the males so employed. In no state, on the other hand, do workers in manufacturing or "white-collar" men represent more than about a quarter of the employed. Among economically active women, however, the median state has 30 per cent in white-collar jobs (very broadly defined); this relates, of course, to small proportions of women working outside the home. On all these occupational features, the relative dispersion among the states was rather large, but absolute ranges were small on most items. Literacy rates did display quite high correlations with workers in agriculture, but very modest correlations with employment in manufacturing. They were much more closely associated with other kinds of indicators in 1940 than in 1960. The 1960 coefficients were slightly larger using indexes of adult schooling than of literacy.

Where large proportions of individuals were earning over 500 pesos monthly in manufacturing, levels of adult schooling exceeded literacy in the magnitude of the correlations. For agriculture it was literacy that gave the larger coefficient. But in each sector both sets of associations were strong. Employment of 8 to 11 year old boys was impressively correlated (negatively) with adult education. As would be expected, literacy of rural males and females--particularly the latter--was associated, state by state, not only with incomes in farming but also with indicators of the use of equipment and mechanization generally.

The features of lead areas are related to the transportation networks but none of these linkages is rigid. Individual states are very dissimilar as regards transport and communication facilities. Even in 1960 possession of bicycles, let alone autos, was very sparse in most states. Attendance at movies and possession of radios likewise were still at low levels and distinctly uneven as among states. Even so modest a facility as running water in houses was a rarity, but distinctly less rare in some states than in others. Possession of radios and autos (but not bicycles) and attendance at movies were quite highly correlated with literacy and schooling of adults, and to about an equal degree for each sex.

Two indexes of traditional or indigenous ways of life than run through this report are the proportions of the population eating only non-wheat bread (which reaches a maximum of three-fifths) and the proportions of males who typically walk barefoot (nearly half the males in the highest ranking state). But, once more, states differ greatly on each index, and median proportions are low. Each traditional trait is negatively correlated to an impressive degree with literacy rates of the states' adults.

Patterns of change over time (from 1940 to 1960 in most instances) were set forth in Chapter IV, using several different ways of cutting into the voluminous statistical material. The basic questions on this topic are, of course, whether states that had taken a lead drew further ahead or whether there was a catching-up process at work, whether some states that were behind forged ahead, and also whether initial signs of advancement dried up. The findings may be conveniently summarized under five headings:

1. Changes in median and quartile values of indicators. Median-state values in most instances shifted in the expected direction from 1940 to 1960. Both bicycles and autos became more common, fewer men went without shoes, white-collar workers became more numerous, and literacy rose, but post-primary schooling of adults did not improve.

2. Stability of state relative positions over the period. On most items that could be repeated the correlations between 1940 and 1960 values were impressively high. There is little indication of displacement of leading or lagging states.

3. Stability of intercorrelations among traits. A loosening-up of the correlations (with states as units) can be expected if hitherto lagging subpopulations are being brought into a common society; yet some traits can become more tightly connected as advance is made to a more developed stage. Comparison of the correlation matrices for the two years (1940 and 1960) showed, for example, that both proportions of males barefoot and indicators of adult schooling were closely associated with economic variables in both years. But the proportion of economically active females was less closely associated with other features in 1960 than in 1940. The positive associations between female proportions of total numbers engaged in manufacturing and other indicators distinguishing between less and more advanced types of industrialization increased. Proportions working in white-collar jobs and proportions possessing middle levels of schooling became more closely connected in 1960. Seemingly areas with higher higher levels of literacy in earlier years lead one generation later in diffusion of the higher-level occupations. The 1940's saw major changes in agriculture as irrigation was extended and agricultural technology changed. One of the results is that whereas the proportion of laborers among farmers was negatively associated with positive indicators of social advancement in 1940, by 1960 that relationship had become positive.

4. Effect of starting level upon amount of change. This way of putting the figures together is congruent with thinking of development as occurring in successive waves. Thus early-stage lead traits gained most over the period 1940-1960 among lagging states that were catching up. Literacy of most

sub-groups is an example. So is the very high correlation between proportions of males going barefoot in 1940 and the extent of the decline in that practice between 1940 and 1960. On the other hand, more advanced lead traits gained the most where in 1940 they were already highest: proportions of males in white-collar jobs and density of autos--associated also in 1940 with smaller urban-rural differences in literacy among older women.

The components analysis contributes to an understanding of these change patterns. One illustration is the factor discussed previously, in which high positive loadings appeared on 1960 inter-generation differences in literacy (15 to 19 minus 40 to 49 year old females in urban and rural areas), high proportions going barefoot in 1940 and on changes between 1940 and 1960, high positive loadings on differences between male and female literacy in the older generation. This reflects the way in which the diffusion process operates in its later stages on any given trait. If the diffusion of literacy is thought of as characterized by the usual ogive growth curve, what is involved here is the attainment by 1940 or earlier of a position above the steep part of the curve among the lead states, while at the time members of the older generation were young in the laggard states, they were still in or only approaching the zone of rapid growth rates. At the opposite extreme traits may be identified that were still in an early phase of growth even in lead states. Thus, a factor that appeared in two matrices identified a certain cluster, namely: high 1960 proportions of unmarried women and of houses with running water, small change in proportions eating wheat bread, small proportions of non-Catholics as of 1940, and large 1940 to 1960 increases in proportions of males in white-collar employment (but low proportions in 1940).

5. Correlation between amount of change in different variables. In the table displaying this matrix (Table 28), the signs of the coefficients are

as expected, but one might have difficulty in foreseeing their sizes. The salient coefficient is .922, for changes in proportions of males and females going barefoot. Changes in occupational patterns are interlinked, as expected. General shifts in literacy are moderately associated for the urban and rural sectors of the same states, and that association is slightly larger among females.

Development inevitably entails, and is bulwarked by, large flows of human beings as migrants from economically lagging to advancing parts of a country. Furthermore, migrants carry with them something of the features of the communities from which they come, and they serve as communication links bringing glimpses of life at their destinations to the folk back home. Migration patterns and their correlates are clearly important.

Mexican migrations have been by no means confined to urban destinations. Localities with large new irrigation projects in the 1940's and thereafter have attracted heavy inflows of farmers (not merely of migrant laborers). Indeed, states in which farms were more mechanized and yielded larger incomes to farm people attracted migrants to both farm and city. In-migrants were relatively more numerous in states equipped with better road networks and possessing more autos, where mass media were more used, where white-collar employees were more numberous, and where young boys of school age were less often holding down jobs. States with higher literacy attracted more migrants. It is the states with presently moderate rather than maximal proportions of adults with post-primary schooling who had the greater proportions of in-migrants in their populations; but this reflects the fact that migrants constitute part of the population base on which the percentages are taken. Large numbers of in-migrants will typically pull down the percentage figures on traits that characterize a distinctively leading minority.

The information fields in which men participate are determined by the society and community in which they grew up, by where friends and relatives have gone (migration patterns), by their associates at work. They are clearly affected, directly or indirectly, by their educational experiences and the degree to which their parents participated in and introduced them to the "educated community." In an area in which there is a relatively high level of educational attainment of adults, a wider exposure of youth to "modern" parts of the economy and of the society can be expected, and, of course, a more direct exposure to education itself. Larger proportions of youth in areas in which there are many educated adults are directly exposed to prior "adopters" of education. The impact of these exposures on behavior of youth may differ, however, with characteristics of the educated population and of those still in school. For example, do men or women have greater influence on the schooling of boys or of girls, or is there any difference? How far do urban patterns take their messages into adjacent rural communities? Not surprisingly, adult schooling beyond primary years is definitely associated with literacy of teen-age children especially those living in urban areas. The level of literacy of rural youth is rather better predicted (negatively) by the adult index of "no schooling." Yet, for each sex and residence category there are states that have experienced no residual inter-generation improvements in literacy after migrants have come or gone.

Inter-generation differences in the literacy of urban males and for the young-to-middle-aged urban and rural females are negatively correlated with proportions of adults who possess post-primary schooling, again evidencing the "successive waves" features of development. Areas high on 1960 proportions of adults with post-primary schooling reflect high literacy starting points in the older age groups. (The fact that the association is reversed for rural males is almost certainly attributable to the confounding effects of selective male rural-urban migration.) The sequential phasing of diffusion of literacy is illustrated also in the fact that urbanization indexes were positively correlated with 1930 to 1940 literacy gains of adolescents, but the correlation turned negative for the following decade.

Further traces of sequential developments were evident in that urbanization was more closely associated with high enrollments of children in earlier years than in 1960. Nevertheless, rates barely reached 60 per cent for the 6- to 14-year olds in the median state in 1960. Literacy of older adults tends to be a better predictor of children's enrollment than is adult possession of post-primary schooling, and literacy was a somewhat better predictor in early than in recent years.

As remarked earlier, school retention can be measured by proportions of over-age pupils, by promotion rates, or by pass rates on examinations. Continuation from third to fourth grades (many rural districts have only three grades) ranged among states in 1960 from 24 to 81 per cent in rural schools and from 76 to 98 per cent in urban districts. (The corresponding 1942 rates had been: 14 to 72 and 53 to 94 per cent.) The lowest urban rate in 1960 was almost equal to the highest rural one. As would be expected, continuation rates were high in states with numerous progressive features. Between 1940 and 1960, state levels of enrollment remained relatively in the same order, as did urban (but not rural) pass rates on exams. Continuation rates displayed only modest stability over time.

Age-grade relationships proved to be associated with other traits in interesting ways. Thus, one measure of the isolation of areas marked by high retardation is the clear negative correlation with presence of radios, with literacy of adult females, and with indexes of farm mechanization (despite positive correlation with high proportions of men engaged in agriculture).

The size of these coefficients with retardation was about the same for rural as for urban pupils and of about the same size for pupils of each sex.

Effects of urbanization are evidenced in several ways. For example, there is a moderate positive association between development of cities and 1960 enrollments. Overage is more a rural than an urban affair. Continuation rates are higher in urban areas. Obviously, communication of attitudes favorable to schooling is uneven from state to state, and much of it goes on within the urban or rural population only. The data on enrollments up to 1940 cannot be separated by urban and rural residence, but correlations of enrollment for total state populations with urban proportions and with adult literacy are higher than those for recent years.

In Chapter VI, multiple regressions were used to explain the geographic distribution of primary enrollments. The independent variables were selected to provide good indicators of (1) visibility of economic returns to schooling (2) ability to pay for it, (3) costs of schooling to the individuals of the community (represented by foregone employment opportunities, and (4) degree of exposure to attitudes and "tellings" presumptively favorable to school attendance. Because of inevitable problems of multicollinearity, it was not always possible to separate these elements in the empirical findings; almost any variable selected would inevitably pick up some elements of the model other than the main feature that it was supposed, hopefully, to represent. Nevertheless, by comparisons among a series of multiple regression equations, it was possible to draw some reasonably firm conclusions. In all cases the dependent variable was enrollment rates of children age 6 to 14: total for 1937, total for 1960, urban 1960, and rural 1960.

At first sight it might seem that one of the most surprising results was the behavior of the variable "proportions of males barefoot," which comes through with highly significant positive coefficients in multiple regressions that include any variable relating to either adult literacy or occupation, which ever the dependent variable. However, the real surprise is not in this, but in the negligible zero-order correlations between enrollment rates and proportions of men barefoot. At the same time, there are strong negative associations between proportions barefoot and such variables as adult literacy (male or female) or proportions of males in white-collar employment and strong positive associations with proportions employed in agriculture. Given this combination of facts, it was expected that when controlling for education or occupational characteristics, the proportions barefoot would have the positive sign it displayed. The more indigenous populations were doing remarkably well with respect to enrollment of their children in 1960; for any given economic or adult educational level they were apparently doing much better than other people. Proportions barefoot had been introduced to pick up an attitude cluster that was assumed to be less rather than more favorable to schooling. The results (which are consistent from 1937 to 1960 and for rural and urban populations alike) are extremely persuasive. The attitude proxy performs with marked success in an inverse direction that is at once surprising and encouraging.

Both the highest multiple regression coefficients, and the highest partial coefficients on some variables (notably literacy of older females) were in the 1937 equations for total state populations. However, to discuss further either the 1937 or the 1960 "total" sets would be less interesting than to concentrate on the results of the separate regressions for the urban and the rural 1960 enrollment rates. The urban regressions will be considered first.

Already among the better predictors of urban enrollments in a zero-order relationship, the proportion of high incomes in manufacturing is raised further, to display a highly significant partial coefficient of .651 when it is combined with proportions of in-migrants and of males in white-collar jobs. It is almost certainly serving primarily as an index of visibility of economic benefits of schooling, though partially also as an indicator of ability to pay for it. Proportions of in-migrants, proportions in white-collar employment, and proportions with high income from wages in manufacturing together explained 44 per cent of the 1960 urban inter-state variance in enrollment. But once again it is extremely interesting to analyze the signs of these variables. That for in-migration is a highly significant negative 506. (In zero-order relationships with urban enrollment rates, in-migration told virtually nothing.) Together with other evidence, this is an unambiguous indicator of the segmentalization of urban society and the separate sub-cultures and information fields with which large proportions of migrants to the city are identified. Almost all the features of the school decision model are picked up in this particular equation, with one exception. The exception is "proportions of young children (age 8 to 12) in paid employment," which came through in the urban equations only when it was combined with certain other equally weak variables (and did not attain a 5 per cent significant level). In other equations in which urban enrollment was the dependent variable, literacy of older women proved to be somewhat more important than that of older men. The combination of literate older females with barefoot males gave the highest multiple regression coefficient obtained on urban enrollments (an R^2 of .473). It must be stressed, however, that literacy of older females may reflect such a range of other factors as to blur its meaning; it can be interpreted at one and the same time as an attitude and information-field variable, an indirect indicator of ability to pay, and an indirect indicator of visibility of returns. The slightly higher R^2 (and higher F value) is reached at the sacrifice of greater precision in identification of processes bearing upon urban enrollments.

The regressions for rural enrollments were quite different. Variables that might have indicated local visibility of returns to schooling (or, more probably, local ability to pay for it) were of little or no explanatory value. The child-employment factor, on the other hand, emerged as important (with a high negative coefficient) in each equation in which it was entered. The highest multiple correlation was obtained by combining percentages of boys age 8 to 11 who were employed with percentages of males going barefoot (an R^2 of .520), the former variable taking a negative and the latter again a positive coefficient. That the negative correlation between child employment and enrollment is not spurious is evident from the failure of the former to come through in the urban regressions--and despite the fact that the only evidence available suggests that earnings of employed children are greater in cities. In the country the children's earnings are a more important marginal contribution to the household. Summing up all the rural regressions (of which only a few were picked out for comment), they give clear evidence that the important determinants of enrollment in the countryside are attitudes about schooling and the degree of opportunity for and importance of foregone earnings of school-age children. Such indexes as were available on ability to pay or local visibility of returns to education were of no importance as explanatory factors. This contrasts with the urban picture, in which the important factors were visibility of returns and the extent to which the urban population was segmentalized, with large numbers of in-migrants participating only in a limited degree in the forward edge of Mexican modernization and in the information fields common to the more advanced sectors of the society.

If only because data for individuals and families that can be used to analyze the role of education in development are almost non-existent, analysis of area data in developing countries will yield large returns. Actually, there are advantages in using area data, as discussed earlier, despite the undeniable ambiguity that is called the "ecological fallacy." As Fattahipour demonstrated for Iran, the vast amount of census material available on sub-national areas in some developing countries will reward exploitation by the development researcher. Comparing his findings for Iran with the present analysis for Mexico reveals many similarities and many contrasts; these are quite different cultures and countries at quite different stages of development, with very different historical heritages and physiographic conditions. Yet evidence of the patterns in which information flows through a changing society and the factors determining how slowly or rapidly residents of different places respond to or resist the stimuli to school attendance emerges clearly in both cases. It reveals a systematic sequential process that can be traded from the older generations of Iran in 1956 to those of Mexico in 1937 and on down to the young adults of the Mexico of 1960. Even those differences in sex patterns that are expected in comparing a Moslem with a Catholic-Indian nation, though they are evident enough, still fall within the general framework rather than overriding it.

Probably every researcher who has probed into anything with a complexity approaching the problems that have been tackled in this resarch comes out with a list of things that should still be done and of research endeavors he suggests others might well take up. This author is no exception. The major suggestions are broadly two.

First, the use of smaller geographic units, as the municipio in Mexico, would permit a finer drawing of spatial communication patterns, both within hierarchies of cities and between town and adjacent country. By reducing the heterogeneity of the observation units, it would permit also a sharper identification of relationships among those variables on which small-unit data can be obtained. This would be well worth doing for selected parts of Mexico despite the fact that educational data in particular are severely limited at the municipio level.

Second, Chapter VI barely touched the factors influencing education of youth, even if looking only at the primary levels. Other transforms of the variables already used should be tested. More important, however, is experimentation with other dependent variables, such as continuation rates and age-grade indicators of progress through the schools. There is reason to suspect that some of the results might be quite different in certain respects than those undertaken using enrollments as the dependent variable. Continuation rates pick up to a greater degree the more advanced aspects of the development process and provide clues in predicting the conditions under which rising proportions of young people will move on into post-primary education.

Over-all, it is suggested that the joining of "information field" concepts and communication theory with economic decision models in the analysis of development processes should yield increasing insights into those processes. This study only taps a few of the possibilities in such an approach.

APPENDIX A

GLOSSARY

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GLOSSARY

Source	Form[u]	Variable Number	Variable Name	Description
			Population Distribution and Change	
b pp. 1 and 39	L	1	Density 1940	Population/KM^2
d p. v	L	2	Density 1960	
a p. 40	L	3	Urban 1930	
b pp. 1 and 39	L	4	Urban 1940	Per cent of total population in towns of 2,500+
c p. 26	L	5	Urban 1950	
d pp. 1-9	L	6	Urban 1960	
d pp. 59-68	R	7	Capital Dummy 1960	Dummy variables; 1 if capital city was the largest city in the state; 0 otherwise
b pp. 1 and 39	L	8	Capital/Urban 1940	Population of the capital city/urban population
d pp. 68 ff.	R	9	Capital/Urban 1960	
b pp. 1 and 39	L	10	Capital Size 1940	Population of the capital city
d p. 39	L	11	Capital Size 1960	
d pp. 59 ff.	R	12	Pop 50,000+ 1960	Per cent of total population in cities of 50,000+
x	L	13	Urban 1960/1930	Ratio of 1960 to 1930 per cent of population in towns 2,500+
x	R	14	Urban 1960-1950/1960-1940	Per cent of 1940 to 1960 change in proportion of population in towns 2,500+ that occurred between 1950 and 1960
b pp. 1 and 31	LT	15	Born Instate 1940	Males born in the state in which they are now living/population of the state. Variable sometimes used as In-migrant/Resident
c pp. 50-51	R	16	Born Instate 1950	
d pp. 145 ff.	R	17	Born Instate 1960	

Transportation

i	pp. 1051 and 24	L	18	RR/Pop 1940	Railroad kilometers/population
p	pp. 104 ff.	R	19	RR/Pop 1960	
i	p. 1051	L	20	RR/Area 1940	Railroad kilometers/Km^2
p	pp. 104 ff.	L	21	RR/Area 1960	
h	p. 764	L	22	Roads/Pop^A 1940	Roads Km/population
h	p. 764	L	23	Roads/Pop^B 1940	Km of all weather roads/population
p	p. 12 and K, p. 467	L	24	Roads/Pop 1960	
h	p. 764	L	25	Roads/Area^A 1940	Roads/Km^2 of area
h	p. 764	R	26	Roads/Area^B 1940	Km of all weather roads/Km^2 of area
p	p. 12 and K, p. 467	L	27	Roads/Area 1960	
k	p. 467	R	28	Roads Paved/Roads 1960	Proportion of road kilometers paved, 1960
h	p. 769	L	29	Bicycles/Pop 1940	
k	p. 471	R	30	Bicycles/Pop 1960	Bicycles/population
x		R	31	Bicycles 1960-1940	
l	p. 92	L	32	Autos/Pop 1940	Autos registered in 1939/population 1940
k	p. 468	L	33	Autos/Pop 1960	
x		R	34	Autos 1960/1939	Autos/population; 1960/1939
x		L	35	Autos/Pop 1960-1940	Autos/population; 1960 minus 1940

Utility and Communication Facilities

h	p. 676	L	36	Elect/Capita 1940	
k	p. 411	L	37	Elect/Capita 1960	Electricity consumption/per capita
x		L	38	Elect/Capita 1960-1940	

Source	Form[u]	Variable Number	Variable Name	Description
h pp. 289 and 24	R	39	Movies/Pop 1940	Cinema sales/population
k p. 271	L	40	Movies/Pop 1960	
x	R	41	Movies/Pop 1960-1940	Cinema sales/population 1960 minus 1940
l p. 35	L	42	Library Use 1940	Library use/population; includes only libraries with 500+ volumes
d pp. 629 and 601	R	43	Running Water 1960	Percentage of dwellings with running water
d pp. 631 and 601	R	44	Radio 1960	Percentage of dwellings with raios: the number of radios owned, rather than the number present. Definition of dwelling includes places for living rather than for commercial uses
Marriage and Fertility Rates				
d pp. 112 ff.	L	45	Single F 20-24 1960	Per cent of females age 20-24 who are unmarried
b pp. 1 and 39; pp. 32 and 69	L	46	F under 5 Yrs/F 1940	Per cent of females under 5 years of age
d pp. 70 ff. and pp. 94 ff.	R	47	F under 5 Yrs/F 1960	
d pp. 632 ff.	L	48	Child/F 40-49 U 1960	Children ever born to women 40-49 years old; urban
d pp. 632 ff.	R	49	Child/F 40-49 R 1960	Children ever born to women 40-49 years old; rural

Labor Force Participation

a	p. 67	L	50	EcAct M 1930	Male population economically active/male population. Economically active includes the population 12+ years of age who have an occupation for pay or who exercise an economic activity for the family without pay. In 1960, the economically active population included 8-11 year olds
c	p. 88	R	51	EcAct M 1940	
c	pp. 84-85	R	52	EcAct M 1950	
d	pp. 1-9	L	53	EcAct M 1960	
a	p. 67	R	54	EcAct F 1930	Female population economically active/female population. "Economically active" defined as for men; excludes domestic work in own home
c	p. 88	L	55	EcAct F 1940	
c	pp. 84-85	R	56	EcAct F 1950	
d	pp. 1-9	L	57	EcAct F 1960	
b	pp. 1 and 39	L	58	EcAct F 10+ 1940	Economically females/females 10+ years of age
d	p. 363	R	59	EcAct F 12+ 1960	Economically females/females 12+ years of age
x		L	60	EcAct F 1960-1940	Economically female/female population 1960 minus 1940
g	pp. 32, 240-43	R	61	Devel. Index 1950	Composite index of development; rank sums of the following variables: (1) Per cent of economically active in manufacturing, 1950. (2) Per cent of economically active in non-agriculture, 1950. (3) Per cent of population classed as urban, 1950. (4) Per Cent of population in cities of 10,000 per or more. (5) Value added by manufacturing per capita of the total population, 1950. (6) Value of manufacturing production per capita of the total population, 1950. (7) Average earnings of all personnel in manufacturing, 1950. These were synthesized into a composite index of development by ranking the states for each and summing the numerical value of the rank position for each state.

Source	Form[u]	Variable Number	Variable Name	Description
d p. 363	L	62	Employ 8-11 M 1960	Employment of 8 to 11 year olds/Economically active
d p. 363	L	63	Employ 8-11 F 1960	
White Collar and Professional Workers				
b pp. 30-67	L	64	Collar/EcAct M 1940	White collar/Economically active; white collar workers are: (a) directores, proprietorios, socios, and empresarios plus (b) empleados and dependientes from mining, industries, communication, transport, commerce; and (c) funcionarios and empleados in public administration, and (d) professionistas.
d p. 417	L	65	Collar/EcAct M 1960	White collar/Economically active; white collar includes (a) professionistas y tecnicos, (b) personal directivo, (c) oficinistas, (d) vendedores
x	L	66	Collar/EcAct M 1960-1940	White collar males/Economically active males, 1960 minus 1940
b pp. 30-67	R	67	Collar/EcAct F 1940	As 64, but for females
d p. 417	R	68	Collar/EcAct F 1960	As 65, but for females
	R	69	Collar/EcAct F 1960-1940	White collar females/Economically active females, 1960 minus 1940
d p. 417	L	70	Clerk/EcAct T 1960	Clerical/Economically active
d p. 417	L	71	Clerk/EcAct M 1960	
d p. 417	L	72	Clerk/EcAct F 1960	

d	p. 417	L	73	Prof/EcAct T 1960	Profesionistas y tecnicos/Economically active
d	p. 417	L	74	Prof/EcAct M 1960	
d	p. 417	R	75	Prof/EcAct F 1960	
				Public Administration	
a	pp. 78 ff.	L	76	P.A./EcAct M 1930	Public administration/Economically active males
b	pp. 30-67	L	77	P.A./EcAct M 1940	
				Agriculture	
a	p. 78	LT	78	Ag/EcAct M 1930	Males in agriculture/Economically active males
b	pp. 19 and 57	LT	79	Ag/EcAct M 1940	
d	p. 367	LT	80	Ag/EcAct M 1960	
x		R	81	Ag/EcAct M 1960-1940	Males in agriculture/Economically active males 1960 minus 1940
i	p. 802	L	82	Ejidos/AgPop 1940	Ejiditarios/Male population in agriculture; the proportion of the agricultural population who cultivate lands conceded by the nation under special legislation
b	pp. 19 and 59	L	83	Ag Labor/Ag M 1940	Per cent of males in agriculture who are jornaleros and obreros, i.e., manual workers who receive a salary or a daily wage
d	p. 367	R	84	Ag Labor/Ag M 1960	
b	pp. 19 and 59	L	85	Ag Prop/Ag M 1940	Per cent of males in agriculture who work alone, or who are proprietors of enterprises, but have no one working for them for a salary
d	p. 367	R	86	Ag Prop/Ag M 1960	
x		R	87	Ag Prop/Ag M 1960-1940	Per cent of males in agriculture who are proprietors 1960 minus 1940

Source	Form[u]	Variable Number	Variable Name	Description
e pp. 53-56	L	88	Equip/Land 1950	Investment in equipment; value of machinery, implements in thousand pesos/land value
e pp. 53-56	L	89	Farm Mechanized 1950	Per cent of farms mechanized (includes farms mechanized and farms having mixed traction)
e pp. 53-56	L	90	Farm Nonmechanized 1950	Per cent of farms without even animal traction
s Table 1	LT	91	Ag Inc under $500 1960	Per cent of the population in agriculture with incomes under 500 pesos monthly. This variable is sometimes used conversely as Ag Inc over $500 1960
g pp. 143-50	L	92	Returns Glick 1930	Returns to the human agent; productivity of labor in agriculture in pesos at current prices. This measure was based on an estimated value of land and capital employed in agriculture. Glick assumed returns of 5 per cent and alternately of 10 per cent on those values. The resultant estimates of returns to land and capital were subtracted from net farm income to get returns to the human agent. The estimates using 10 per cent returns are used in this study
g pp. 143-50	L	93	Returns Glick 1950	
x	L	94	Returns Glick 1950-1930	Returns to the human agent in agriculture 1950 minus 1930
			Manufacturing and Mining	
a p. 78	R	95	Mfg/EcAct M 1930	Males in manufacturing/Economically active males
b pp. 21 and 58	L	96	Mfg/EcAct M 1940	
d p. 367	L	97	Mfg/EcAct M 1960	
x	R	98	Mfg/EcAct M 1960-1940	Males in manufacturing/Economically active males 1960 minus 1940

a	p. 78	L	99	Mfg F/M+F Mfg 1930	Female percentage of total employed in manufacturing
b	pp. 21 and 58	L	100	Mfg F/M+F Mfg 1940	
d	p. 367	L	101	Mfg F/M+F Mfg 1960	
s	Table 1	L	102	Mfg Inc $1,500+ 1960	Per cent of those engaged in manufacturing who had incomes over 1,500 pesos monthly
s	Table 1	R	103	Mfg Inc under $500 1960	Per cent of those engaged in manufacturing who had incomes under 500 pesos monthly. This variable is sometimes used conversely, as per cent with incomes over 500 pesos.
g	pp. 240-43	L	104	Mfg. Glick 1950	Value added in manufacturing/Per capita of population
f	pp. 5-9	R	105	Pay/Emp Fact 1930	Average monthly pay per factory employee. The 1930 census covers all firms (except mining, petroleum, and quarrying) regardless of size. Beginning in 1935 the census was limited to firms doing 10,000 pesos or more per year in business. In 1950 the restriction on size of firms was removed for firms included in the census
f	pp. 5-9	L	106	Pay/Emp Fact 1940	
f	pp. 5-9	L	107	Pay/Emp Fact 1950	
f	pp. 5-9	R	108	Pay/Emp Fact 1955	
x		L	109	Pay/Emp Fact 1955/1940	Ratio of monthly pay per factor em ployee in 1955 to monthly pay per factory employee in 1940
a	p. 78	L	110	Mining/EcAct M 1930	Males in mining/Economically active males
b	pp. 20 and 57	L	111	Mining/EcAct M 1940	
d	p. 367	L	112	Mining/EcAct M 1960	
				Cultural Traits	
b	pp. 14 and 51	R	113	Non-Catholic T 1940	Per cent of the total population non-Catholic
d	pp. 282-89	L	114	Non-Catholic T 1960	

Source	Form[u]	Variable Number	Variable Name	Description
b pp. 34 and 71	L	115	Sleep on Floor T 1940	Per cent of total population who sleep on the floor and do not eat wheat bread
b pp. 34 and 71	LT	116	Sleep on Bed T 1940	Per cent of total population who sleep in a bed
b pp. 34 and 71	LT	117	Nonwheat T 1940	Per cent of total population who do not eat wheat bread
c pp. 75-76, 87-88	LT	118	Nonwheat T 1950	
d pp. 280-81	R	119	Nonwheat T 1960	
x	R	120	Nonwheat T 1940-1950	Change in per cent of total population who do not eat wheat bread
x	R	121	Nonwheat T 1950-1960	
x	R	122	Nonwheat T 1940-1960	
d p. 280	L	123	Barefoot Urban T 1960	Per cent of total population who walk barefoot
d p. 280	L	124	Barefoot Rural T 1960	
b pp. 1 and 39; pp. 35 and 72	L	125	Barefoot M 1940	Per cent of males who walk barefoot
c pp. 75-76,87-88	L	126	Barefoot M 1950	
d p. 274	R	127	Barefoot M 1960	States were ranked on this variable; the states with a high rank had the lowest proportions barefoot
b pp. 1 and 39; pp. 35 and 72	L	128	Barefoot F 1940	Per cent of females who walk barefoot
c pp. 75-76,87-88	L	129	Barefoot F 1950	
d p. 274	L	130	Barefoot F 1960	
x	L	131	Barefoot M/F 1940	Ratio of male to female per cent barefoot
x	R	132	Barefoot M/F 1960	

x		R	133	Barefoot M 1940-1950	Change in per cent of males barefoot
x		R	134	Barefoot M 1950-1960	
x		R	135	Barefoot M 1940-1960	
x		R	136	Barefoot F 1940-1950	Change in per cent of females barefoot
x		R	137	Barefoot F 1950-1960	
x		R	138	Barefoot F 1940-1960	

Literacy: Literacy of Populations above Designated Ages

a	p. 55	R	139	Lit 10+ T 1930	Per cent of the population 10+ years of age who are literate: literacy is defined as the population who say they can read and write Spanish
b	pp. 7 and 45	R	140	Lit 10+ T 1940	
d	pp. 290 ff. and pp. 94 ff.	R	141	Lit 10+ T 1960	
b	pp. 7 and 45	R	142	Lit 6+ T 1940	Per cent of the population 6+ years of age who are literate
c	pp. 82-83	R	143	Lit 6+ T 1950	
d	pp. 651-52	R	144	Lit 6+ T 1960	
b	pp. 7 and 45	R	145	Lit 40+ M 1940	Per cent 40+ years of age who are literate
b	pp. 7 and 45	R	146	Lit 40+ F 1940	
d	pp. 290 ff. and pp. 94 ff.	R	147	Lit 40+ M 1960	
d	pp. 290 ff. and pp. 94 ff.	R	148	Lit 40+ F 1960	
a	p. 55	R	149	Lit 30+ M 1930	Per cent 30+ years of age who are literate
a	p. 55	R	150	Lit 30+ F 1930	
d	p. 308	R	151	Lit 30+ M 1960	
d	p. 308	R	152	Lit 30+ F 1960	
b	pp. 19 and 56	R	153	Lit 6+0 Sch M 1940	Per cent 6+ who are literate without schooling
b	pp. 19 and 56	LT	154	Lit 6+0 Sch F 1940	

Source	Form[u]	Variable Number	Variable Name	Description
			Literacy of Youth	
a p. 55	L	155	Lit 10-14 M 1930	Per cent of 10-14 years old who are literate
a p. 55	LT	156	Lit 10-14 F 1930	
b pp. 7 and 45	R	157	Lit 10-14 M 1940	
b pp. 7 and 45	R	158	Lit 10-14 F 1940	
d pp. 290 ff. and pp. 94 ff.	R	159	Lit 10-14 M 1960	
d pp. 290 ff. and pp. 94 ff.	R	160	Lit 10-14 F 1960	
x	R	161	Lit 10-14 M 1940-1930	Change in per cent of 10-14 years old literate
x	R	162	Lit 10-14 F 1940-1930	
x	LT	163	Lit 10-14 M 1960-1940	
x	LT	164	Lit 10-14 F 1960-1940	
x	R	165	Lit 6+ 1960-1950/1960-1940	Per cent of 1940 to 1960 change in literacy rates that occurred between 1950 and 1960
			Urban Literacy by Age	
d pp. 290 ff. and pp. 94 ff. Includes all literacy by age entries for urban and rural pop. in 1960	R	166	Lit 60+ MU 1960	Per cent of urban males who are literate by designated ages
d	R	167	Lit 50-59 MU 1960	
d	R	168	Lit 40-49 MU 1960	
d	L	169	Lit 30-39 MU 1960	
d	R	170	Lit 25-29 MU 1960	
d	R	171	Lit 20-24 MU 1960	
d	R	172	Lit 15-19 MU 1960	
d	R	173	Lit 10-14 MU 1960	

d	R	174	Lit 60+ FU 1960	Per cent of urban females who are literate by designated ages
d	LT	175	Lit 50-59 FU 1960	
d	LT	176	Lit 40-49 FU 1960	
d	R	177	Lit 30-39 FU 1960	
d	LT	178	Lit 25-29 FU 1960	
d	R	179	Lit 20-24 FU 1960	
d	R	180	Lit 15-19 FU 1960	
d	R	181	Lit 10-14 FU 1960	

Rural Literacy by Age

d	LT	182	Lit 60+ MR 1960	Per cent of rural males who are literate by designated ages
d	LT	183	Lit 50-59 MR 1960	
d	R	184	Lit 40-49 MR 1960	
d	R	185	Lit 30-39 MR 1960	
d	R	186	Lit 25-29 MR 1960	
d	R	187	Lit 20-24 MR 1960	
d	LT	188	Lit 15-19 MR 1960	
d	R	189	Lit 10-14 MR 1960	
d	R	190	Lit 60+ FR 1960	Per cent of rural females who are literate by designated ages
d	R	191	Lit 50-59 FR 1960	
d	R	192	Lit 40-49 FR 1960	
d	R	193	Lit 30-39 FR 1960	
d	LT	194	Lit 25-29 FR 1960	
d	R	195	Lit 20-24 FR 1960	
d	R	196	Lit 15-19 FR 1960	
d	LT	197	Lit 10-14 FR 1960	

Age Differences in Literacy by Sex and Residence

x	R	198	(15-19)-(40-49) MU 1960	Per cent of urban males 15-19 literate minus per cent of urban males 40-49 literate
x	R	199	(40-49)-(60+) MU 1960	Per cent of urban males 40-49 literate minus per cent of urban males 60+ literate

Source	Form[u]	Variable Number	Variable Name	Description
x	L	200	(15-19)-(40-49) FU 1960	Per cent of urban females 15-19 literate minus per cent of urban females 40-49 literate
x	R	201	(40-49)-(60+) FU 1960	Per cent of urban females 40-49 literate minus per cent of urban females 60+ literate
x	L	202	(15-19)-(40-49) MR	Per cent of rural males 15-19 literate minus per cent of rural males 40-49 literate
x	L	203	(40-49)-(60+) MR 1960	Per cent of rural males 40-49 literate minus per cent of rural males 60+ literate
x	R	204	(15-19)-(40-49) FR 1960	Per cent of rural females 15-19 literate minus per cent of rural females 40-49 literate
x	R	205	(40-49)-(60+) FR 1960	Per cent of rural females 40-49 literate minus per cent of rural females 60+ literate
Sex Differences in Literacy by Age and Residence				
x	R	206	Lit. 60+ MU-F 1960	Per cent of urban males minus per cent of urban females who are literate for designated ages
x	R	207	Lit. 50-59 MU-F 1960	
x	R	208	Lit. 40-49 MU-F 1960	
x	L	209	Lit. 30-39 MU-F 1960	
x	L	210	Lit. 25-29 MU-F 1960	
x	R	211	Lit. 20-24 MU-F 1960	
x	R	212	Lit. 15-19 MU-F 1960	
x	R	213	Lit. 10-14 MU-F 1960	

x		R	214	Lit. 40-49 FU/M 1960	Ratio of female to male percents literate; urban population age 40-49
x		LT	215	Lit. 15-19 FU/M 1960	Ratio of female to male percents literate; urban population age 15-19
x		R	216	Lit. 60+ MR-F 1960	Per cent of rural males minus per cent of rural females years literate for designated ages
x		R	217	Lit. 50-59 MR-F 1960	
x		R	218	Lit. 40-49 MR-F 1960	
x		R	219	Lit. 30-39 MR-F 1960	
x		R	220	Lit. 25-29 MR-F 1960	
x		R	221	Lit. 20-24 MR-F 1960	
x		R	222	Lit. 15-19 MR-F 1960	
x		R	223	Lit. 10-14 MR-F 1960	
x		L	224	Lit. 40-49 FR/M 1960	Ratio of female to male per cents literate; rural population age 40-49
x		LT	225	Lit. 15-19 FR/M 1960	Ratio of female to male per cents literate; rural population age 15-19

Adult Levels of Schooling

c	pp. 56-57	L	226	Adult 25+ 0 M 1950	Per cent of adults age 25+ with no schooling
c	pp. 56-57	L	227	Adult 25+ 0 F 1950	
d	p. 308	L	228	Adult 30+ 0 M 1960	Per cent of adults age 30+ with no schooling
d	p. 308	R	229	Adult 30+ 0 F 1960	
d	p. 308	R	230	Adult 30+ 1-4 M 1960	Per cent of adults age 30+ with 1 to 4 years of schooling
d	p. 308	R	231	Adult 30+ 1-4 F 1960	
c	pp. 56-57	LT	232	Adult 25+ 1-6 M 1950	Per cent of adults age 25+ with 1 to 6 years of schooling
c	pp. 56-57	LT	233	Adult 25+ 1-6 F 1950	

Source	Form[u]	Variable Number	Variable Name	Description
d p. 308	LT	234	Adult 30+ 1-6 M 1960	Per cent of adults age 30+ with 1 to 6 years of schooling
d p. 308	LT	235	Adult 30+ 1-6 F 1960	
c pp. 56-57	L	236	Adult 25+ 7+ M 1950	Per cent of adults age 25+ with 7+ years of schooling
c pp. 56-57	L	237	Adult 25+ 7+ F 1950	
d pp. 319-29	L	238	Adult 30+ 7+ M 1960	Per cent of adults age 30+ with 7+ years of schooling
d pp. 319-29	L	239	Adult 30+ 7+ F 1960	
c pp. 56-57	L	240	Adult 25+ 10+ M 1950	Per cent of adults age 25+ with 10+ years of schooling
c pp. 56-57	L	241	Adult 25+ 10+ F 1950	
d pp. 319-29	L	242	Adult 30+ 10+ M 1960	Per cent of adults age 30+ with 10+ years of schooling
d pp. 319-29	L	243	Adult 30+ 10+ F 1960	
c pp. 56-57	L	244	Adult 25+ 13+ M 1950	Per cent of adults age 25+ with 13+ years of schooling
c pp. 56-57	L	245	Adult 25+ 13+ F 1950	
d pp. 319-29	L	246	Adult 30+ 13+ M 1960	Per cent of adults age 30+ with 13+ years of schooling
d pp. 319-29	L	247	Adult 30+ 13+ F 1960	
b pp. 17 and 55	L	248	Adult 15+ BAC M 1940	Per cent of adults age 15+ with baccalaureate
b pp. 17 and 55	L	249	Adult 15+ BAC F 1940	
b pp. 17 and 55	L	250	Adult 15+ UN M 1940	Per cent of adults age 15+ with 13+ years of schooling
b pp. 17 and 55	L	251	Adult 15+ UN F 1940	
d p. 309	R	252	7-14 No Sch. M 1960	Per cent of 7-14 year olds without schooling; males
d p. 309	R	253	7-14 No Sch. F 1960	Per cent of 7-14 year olds without schooling; females

b	pp. 17 and 55	LT	254	6+ No Sch. M 1940	Per cent of 6+ population with no schooling
b	pp. 17 and 55	LT	255	6+ No Sch. F 1940	
d	p. 308	R	256	6+ No Sch. M 1960	
d	p. 308	R	257	6+ No Sch. F 1960	
x		R	258	Adult 0 Sch M 1950-1960	Per cent of adults with no schooling 1950-1960; males
x		R	259	6+0 Sch. F/M 1950	Ratio of female to male per cent of population 6+ with no schooling
x		L	260	6+0 Sch. F/M 1960	
b	pp. 19 and 56	L	261	6+6+ Yrs Sch M 1940	Per cent of population 6+ years of age with 6+ years of schooling
b	pp. 19 and 56	L	262	6+6+ Yrs Sch F 1940	

Enrollment Rates

m	p. 100	L	263	Preschool 1944	Per cent of 4 and 5 year old population in kindergarten
k	pp. 181-83	L	264	Preschool 1960	
l	p. 22	L	265	Enrol 6-14 T 1937	Per cent of population 6-14 years old enrolled in primary school
k	p. 181	LT	266	Enrol 6-14 T 1960	
a	p. 66	L	267	Enrol 6-10 M 1930	Per cent of 6-10 year olds enrolled
a	p. 66	L	268	Enrol 6-10 F 1930	
x		R	269	Enrol 6-10 F/M 1930	Ratio of female to male per cent enrolled (age 6-10)
k	p. 181	LT	270	Enrol 6-14 M 1960	Per cent of 6-14 year olds enrolled
k	p. 181	LT	271	Enrol 6-14 F 1960	
x		R	272	Enrol 6-14 F/M 1960	Ratio of female to male per cent enrolled (age 6-14)
k	p. 196	R	273	Enrol 6-14 Urban 1960	Per cent of 5-14 age cohort, 6-14 year olds enrolled; urban

Source	Form[u]	Variable Number	Variable Name	Description
k p. 197	R	274	Enrol 6-14 Rural 1960	Per cent of 5-14 age cohort, 6-14 year olds enrolled; rural
x	R	275	Enrol 6-14 Urban-Rural 1960	Urban minus rural per cent enrolled (age 6-14)
c pp. 54-55	L	276	Enrol 7-12 M 1950	Per cent of 7-12 year olds enrolled
c pp. 54-55	R	277	Enrol 7-12 F 1950	
Percentages of Children First Enrolled in School at Age 6 or Younger by Family Income				
q Table 5	L	278	Enrol 6/Inc $200 1959	Monthly income under 200 pesos
q Table 5	R	279	Enrol 6/$201-600 1959	Monthly income from 201 to 600 pesos
q Table 5	R	280	Enrol 6/$601-1,000 1959	Monthly income from 601 to 1,000 pesos
q Table 5	R	281	Enrol 6/$1,000+	Monthly income 1,000 pesos and over
x	R	282	Enrol 6/(601 to 1,000)-(200) 1959	Per cents for families with monthly income from 600 to 1,000 pesos minus per cents for families with incomes under 200 pesos
Percentages of Children First Enrolled in School at Age 6 or Younger by Father's Occupation				
q Table 6	L	283	Enrol 6/Agriculture 1959	Farming
q Table 6	L	284	Enrol 6/Professional 1959	Professions
x	R	285	Enrol 6/Prof-Ag 1959	Per cents for children of professionals minus per cents for children of farmers

Primary School Continuation Rates

(Number of entrants to Grade 1 in the year t as a ratio to number of entrants to Grade (i-1) in year (t-1). The ratios in the variable refer to the two grades compared in each case)

				Beginning of year enrollments:
				Urban areas:
i pp. 363 and 392	R	286	Cont B 2/1 U 1942	2nd grade 1943/1st grade 1942
	R	287	Cont B 3/2 U 1942	3rd grade 1943/2nd grade 1942
j pp. 193 and 285	L	288	Cont B 4/3 U 1942	4th grade 1943/3rd grade 1942
	L	289	Cont B 5/4 U 1942	5th grade 1943/4th grade 1942
	L	290	Cont B 6/5 U 1942	6th grade 1943/5th grade 1942
				Rural areas:
	R	291	Cont B 2/1 R 1942	2nd grade 1943/1st grade 1942
	R	292	Cont B 3/2 R 1942	3rd grade 1943/2nd grade 1942
	L	293	Cont B 4/3 R 1942	4th grade 1943/3rd grade 1942
	L	294	Cont B 5/4 R 1942	5th grade 1943/4th grade 1942
	L	295	Cont B 6/5 R 1942	6th grade 1943/5th grade 1942
	R	296	Cont 4/3 U-R 1942	Ratio of per cent of entrants in 4th grade 1943 to per cent of entrants in 3rd grade 1942 urban minus rural areas
				Urban areas:
k pp. 207-12	R	297	Cont B 2/1 U 1960	2nd grade 1960/1st grade 1959
	R	298	Cont B 3/2 U 1960	3rd grade 1960/2nd grade 1959
	LT	299	Cont B 4/3 U 1960	4th grade 1960/3rd grade 1959
	R	300	Cont B 5/4 U 1960	5th grade 1960/4th grade 1959
	R	301	Cont B 6/5 U 1960	6th grade 1960/5th grade 1959
				Rural areas:
k pp. 207-12	R	302	Cont B 2/1 R 1960	2nd grade 1960/1st grade 1959
	R	303	Cont B 3/2 R 1960	3rd grade 1960/2nd grade 1959
	R	304	Cont B 4/3 R 1960	4th grade 1960/3rd grade 1959
	R	305	Cont B 5/4 R 1960	5th grade 1960/4th grade 1959
	R	306	Cont B 6/5 R 1960	6th grade 1960/5th grade 1959

Source	Form^{u}	Variable Number	Variable Name	Description
x	R	307	4/3 Urban-Rural 1960	Ratio of per cent of entrants in 4th grade 1960 to per cent of entrants in 3rd grade 1959 urban minus rural
x	R	308	4/3 Urban 1960-1942	Ratio of per cent of entrants in 4th grade 1960 to per cent of entrants in 3rd grade 1959 in urban areas 1960 minus 1942
x	R	309	4/3 Rural 1960-1942	Fourth grade 1960/3rd grade 1959 rural 1960 minus rural 1942
				Number enrolled in Grade 1 at end of year t as a ratio to number enrolled in Grade (i-1) at end of year (t-1)
				Day school: urban
j pp. 193 and 285	R	310	Cont E 2/1 U 1942	2nd grade 1943/1st grade 1942
i pp. 363 and 392	R	311	Cont E 3/2 U 1942	3rddgrade 1943/2nd grade 1942
	L	312	Cont E 4/3 U 1942	4th grade 1943/3rd grade 1942
	L	313	Cont E 5/4 U 1942	5th grade 1943/4th grade 1942
	R	314	Cont E 6/5 U 1942	6th grade 1943/5th grade 1942
				Day school: rural
	R	315	Cont E 2/1 R 1942	2nd grade 1943/1st grade 1942
	F	316	Cont E 3/2 R 1942	3rd grade 1943/2nd grade 1942
	R	317	Cont E 4/3 R 1942	4th grade 1943/3rd grade 1942
	L	318	Cont E 5/4 R 1942	5th grade 1943/4th grade 1942
	R	319	Cont E 6/5 R 1942	6th grade 1943/5th grade 1942
				Day + night schools: urban
k pp. 207-12	R	320	Cont E 2/1 U 1960	2nd grade 1960/1st grade 1959
	R	321	Cont E 3/2 U 1960	3rd grade 1960/2nd grade 1959
	R	322	Cont E 4/3 U 1960	4th grade 1960/3rd grade 1959
	R	323	Cont E 5/4 U 1960	5th grade 1960/4th grade 1959
	R	324	Cont E 6/5 U 1960	6th grade 1960/5th grade 1959

					Day + night schools: rural
		R	325	Cont E 2/1 R 1960	2nd grade 1960/1st grade 1959
		R	326	Cont E 3/2 R 1960	3rd grade 1960/2nd grade 1959
		R	327	Cont E 4/3 R 1960	4th grade 1960/3rd grade 1959
		R	328	Cont E 5/4 R 1960	5th grade 1960/4th grade 1959
		L	329	Cont E 6/5 R 1960	6th grade 1960/5th grade 1959
x		L	330	Cont B 5/1 Urban 1942	Computed by cumulation grades 2/1 + 3/2 + 4/3 + 5/4 + 6/5 for beginning of year enrollments; ratio of per cent of students completing grade 5 to per cent of students enrolled in grade 1
x		L	331	Cont B 5/1 Rural 1942	
x		LT	332	Cont B 5/1 Urban 1960	
x		L	333	Cont B 5/1 Rural 1960	

Secondary School

c	pp. 54-55	L	334	Enrol 15-17 M 1950	Per cent of 15-17 year olds enrolled in secondary school
		L	335	Enrol 15-17 F 1950	
k	pp. 246 and 260	L	336	Present/Enrolled M 1960	Ratio of students present at end of year to those enrolled at beginning
		LT	337	Present/Enrolled F 1960	
t		R	338	Cont Sec 3/1 M 1960	Ratio of students in third year of secondary school to students in first year of secondary school
		R	339	Cont Sec 3/1 F 1960	
k	pp. 246 and 260	L	340	Pass Sec Exam M 1960	Per cent of students passing secondary exam of those present. For variables 336, 337, 340, and 341 data for Universidad Nacional Autonoma Nacional de Mexico and Instituto Politecnico Nacional not available)
		LT	341	Pass Sec Exam F 1960	
		R	342	Enrol 15-17/7-12 M 1950	Ratio of 15-17 year olds enrolled in secondary school to 7-12 year old age cohort
		R	343	Enrol 15-17/7-12 F 1950	

	Source	Form[u]	Variable Number	Variable Name	Description
				Age Grade Progress in School	
					Proportion of age group in or above a grade by sex and by residence
	Unpublished 1963 data	R	344	Age 8 Gr1+ MU 1963	Age 8 above grade 1 urban
		L	345	Age 8 Gr1+ MR 1963	Age 8 above grade 1 rural
x		L	346	Age 8 Gr1+ MU-R 1963	Age 8 above grade 1 urban minus rural
		L	347	Age 10 Gr1 MU 1963	Age 10 in grade 1 urban
		R	348	Age 10 Gr1 MR 1963	Age 10 in grade 1 rural
x		L	349	Age 10 Gr1 MR-MU 1963	Age 10 in grade 1 rural minus urban
		R	350	Age 10 Gr3+ MU 1963	Age 10 above grade 3 urban
		L	351	Age 10 Gr3+ MR 1963	Age 10 above grade 3 rural
		R	352	Age 12 Gr3+ MU 1963	Age 12 above grade 3 urban
		R	353	Age 12 Gr3+ MR 1963	Age 12 above grade 3 rural
x		R	354	Gr MO13 MU 1963	Modal grade at age 13 urban
x		R	355	Gr MO13 MR 1963	Modal grade at age 13 rural
					Females
		R	356	Age 8 Gr1+ FU 1963	Age 8 above grade 1 urban
		L	357	Age 8 Gr1+ FR 1963	Age 8 above grade 1 rural
x		R	358	Age 8 Gr1+ FU-R 1963	Age 8 above grade 1 urban minus rural
		L	359	Age 10 Gr1 FU 1963	Age 10 in grade 1 urban
		R	360	Age 10 Gr1 FR 1963	Age 10 in grade 1 rural
x		R	361	Age 10 Gr1 FR-FU 1963	Age 10 in grade 1 rural minus urban
		L	362	Age 10 Gr3+ FU 1963	Age 10 above grade 3 urban
		R	363	Age 10 Gr3+ FR 1963	Age 10 above grade 3 rural
		LT	364	Age 12 Gr3+ FU 1963	Age 12 above grade 3 urban
		R	365	Age 12 Gr3+ FR 1963	Age 12 above grade 3 rural

x		R	366	Gr MO13 FU 1963	Modal grade at age 13 urban
x		R	367	Gr MO13 FR 1963	Modal grade at age 13 urban

Pass Rates

					Per cent passing grade of those present at end of year
i	p. 377	L	368	Pass 2/Pres U 1942	Grade 2 urban
		R	369	Pass 2/Pres R 1942	Grade 2 rural
		L	370	Pass 4/Pres U 1942	Grade 4 urban
		L	371	Pass 4/Pres R 1942	Grade 4 rural
		LT	372	Paas 6/Pres U 1942	Grade 6 urban
		R	373	Pass 6/Pres R 1942	Grade 6 rural
x		R	374	Pass 1-6 U 1942	Grades 1 through 6 urban
x		R	375	Pass 1-6 R 1942	Grades 1 through 6 rural
k	pp. 220 and 226	R	376	Pass 2/Pres U 1960	Grade 2 urban
		R	377	Pass 2/Pres R 1960	Grade 2 rural
		LT	378	Pass 4/Pres U 1960	Grade 4 urban
		L	379	Pass 4/Pres R 1960	Grade 4 rural
		R	380	Pass 6/Pres U 1960	Grade 6 urban
		R	381	Pass 6/Pres R 1960	Grade 6 rural
x		R	382	Pass 1-6 U 1960	Grades 1-6 urban
x		R	383	Pass 1-6 R 1960	Grades 1-6 rural
x		R	384	Pass 1-6 T 1960	Grades 1-6 urban + rural
x		R	385	Pass 1-6 R/U 1942	Ratio of per cent passing grades 1-6 rural to urban
x		R	386	Pass 1-6 R/U 1960	

School Facilities

l	p. 30	R	387	Pri. Teachers/EcAct 1940	Per cent of economically active population who are primary school teachers
k	p. 205	R	388	Pri. Teachers/EcAct 1960	

Source	Form[u]	Variable Number	Variable Name	Description
	L	389	Sch Incomplete U 1942	
	LT	390	Sch Incomplete R 1942	
n pp. 165-68	L	391	Sch Incomplete U 1950	Per cent of primary schools with grades 1 through 3 or less by urban or rural area
	R	392	Sch Incomplete R 1950	
k p. 192	L	393	Sch Incomplete U 1960	
	L	394	Sch Incomplete R 1960	
	R	395	Sch Incomplete T 1960	
x	R	396	Sch Incomplete U 1942-1960	Differences in per cent of incomplete schools 1942 minus 1960
x	R	397	Sch Incomplete R 1942-1960	

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[a] Estados Unidos Mexicanos, Secretaria de la Economia, Direccion General de Estadistica, V Censo de Poblacion: 1930. Resumen General (Mexico, 1934).

[b] _______. VI Censo de Poblacion: 1940. Resumen General (Mexico, 1943).

[c] _______. VII Censo de Poblacion: 1950. Resumen General (Mexico, 1953).

[d] Estados Unidos Mexicanos, Secretaria de Industria y Comercio, Direccion General de Estadistica, VIII Censo de Poblacion: 1960. Resumen General (Mexico, 1962).

[e] Estados Unidos Mexicanos, Secretaria de Economia, Direccion General de Estadistica, III Censo Agricola, Ganadero y Ejidal: 1950. Resumen General (Mexico, 1956.

[f] Estados Unidos Mexicanos, Secretaria de Industria y Comercio, Direccion General de Estadistica, Censo Industrial: 1956. Resumen General (Mexico, 1959).

[g] Milton Glick, "The Impact of Economic Development on the Returns to Labor in Agriculture in Mexico" (unpublished Ph.D. dissertation, Department of Economics, University of Chicago, 1963).

[h] Estados Unidos Mexicanos, Secretaria de la Economia, Direccion General de Estadistica, Anuario Estadistico: 1941 (Mexico, 1943).

[i] Estados Unidos Mexicanos, Secretaria de la Economia, Direccion General de Estadistica, Anuario Estadistico: 1942 (Mexico, 1948).

[j] _______. Anuario Estadistico: 1943-1945 (Mexico, 1950).

[k] Estados Unidos Mexicanos, Secretaria de Industria y Comercio, Direccion General de Estadistica, Anuario Estadistico: 1960-1961 (Mexico, 1963).

[l] Estados Unidos Mexicanos, Secretaria de la Economia Nacional, Direccion General de Estadistica, Compendio Estadistico: 1941 (Mexico, 1941).

[m] _______. Compendio Estadistico: 1947 (Mexico, 1947).

[n] _______. Compendio Estadistico: 1953 (Mexico, 1953).

[o] _______. Compendio Estadistico: 1958 (Mexico, 1959).

[p] Estados Unidos Mexicanos, Secretaria de Industria y Comercio, Direccion General de Estadistics, Compendio Estadistico, 1960 (Mexico, 1960).

[q] Estados Unidos Mexicanos, Departamento de Muestreo, Fundamento Estadistico del "Plan de Once Anos de Educacion Primaria" Junio-Agosto (Mexico, 1961).

[r] Age-grade progress; unpublished data, 1963.

[s] Estados Unidos Mexicanos, Secretaria de Industria y Comercio, Direccion General de Estadistica, Departamento de los Censos, Ingresos por Trabajo de la Poblacion Economicamente Activa y Jefes de Familia (Mexico, 1964).

[t] Estados Unidos Mexicanos, Secretaria de Educacion Publica, Direccion General de Segunda Ensenanza, Departamento Tecnico Seccion de Estadistica.

[u] The variables were used in one of the following forms: R for raw value, L for log, and LT for log transformation: log (100 - x).

[x] The variable is in the form of a ratio or difference, the separate items of which are described elsewhere in the Glossary.

APPENDIX B

CORRELATION MATRICES

TABLE 57

CORRELATION MATRIX: POPULATION, TRANSPORTATION, UTILITIES AND COMMUNICATION VARIABLES AGAINST THEMSELVES, EACH OTHER, AND SELECTED OTHER VARIABLES

		Population Distribution and Change															
		Density		Urban				Cap. Dummy	Cap. Urban		Cap. Size		Pop 50,000+	Urban		Born Instate	
		1940	1960	1930	1940	1950	1960	1960	1940	1960	1940	1960	1960	1960/30	1960-50/ 1960-40	1940	1950
	Variable Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Population distribution and change																	
1	Density 1940	1.000	.974	-.332	-.250	-.197	-.188	-.086	-.315	-.375	.294	.077	-.156	-.356	-.353	-.499*	-.451*
2	Density 1960	.974	1.000	-.260	-.192	-.112	-.093	-.071	-.289	-.373	.258	.101	-.052	-.152	-.411	-.365*	-.304*
3	Urban 1930	-.322	-.260	1.000	.981	.943	.907	-.039	.292	.328	.256	.344	.615	.201	.177	.577*	.565*
4	Urban 1940	-.250	-.192	.981	1.000	.955	.923	-.075	.287	.307	.287	.340	.599	.191	.173	.555*	.543*
5	Urban 1950	-.197	-.112	.943	.955	1.000	.977	-.067	.211	.199	.245	.351	.600	.342	-.002	.575*	.585*
6	Urban 1960	-.188	-.093	-.907	.923	.977	1.000	-.053	.153	.154	.268	.408	.631	.418	-.025	.566	.598*
7	Capital/Dummy 1960	-.086	-.071	-.039	-.075	-.067	-.053	1.000	.547	.571	.239	.351	-.029	.076	.103	.031*	-.021*
8	Capital/Urban 1940	-.315	-.289	.292	.287	.211	.153	.547	1.000	.943	.185	.194	.236	.036	.231	-.363*	-.316*
9	Capital/Urban 1960	-.375	-.373	.328	.307	.199	.154	.571	.943	1.000	.238	.281	.297	-.023	.446	.292*	.242*
10	Capital Size 1940	.294	.258	.256	.287	.245	.268	.239	.185	.238	1.000	.914	.482	-.234	-.129	-.141*	.149*
11	Capital Size 1960	.077	.101	.344	.340	.351	.408	.351	.194	.281	.914	1.000	.638	.073	-.144	-.054*	.061*
12	Pop 50,000+ 1960	-.156	-.052	.615	.599	.600	.631	-.029	.236	.297	.482	.638	1.000	.358	-.057	.469*	.475*
13	Urban 1960/1930	-.356	-.152	.201	.191	.342	.418	.076	.086	-.023	-.234	.073	.358	1.000	-.281	.634*	.684*
14	Urban 1960-1950/1960-1940	-.353	-.411	.177	.173	-.002	-.025	.103	.231	.446	-.129	-.144	-.057	-.281	1.000	-.030**	-.041**
15	Born Instate 1940*	-.499*	-.365*	.577*	.555*	.575*	.560*	-.031*	-.363*	.292*	-.141*	.054*	.469*	.634*	-.030*	1.000**	.968**
16	Born Instate 1950*	-.451*	-.304*	.565*	.543*	.585*	.598*	-.021*	-.316*	.242*	-.149*	.061*	.475*	.684*	-.041*	.968**	1.000**
Transportation																	
18	RR/Pop 1940	.144	.221	.164	.159	.275	.310	-.106	-.083	-.265	.181	.245	.315	.363	-.853	.379*	.374*
19	RR/Pop 1960	-.365	-.407	.362	.360	.400	.418	-.088	-.025	-.073	.057	.106	.138	.064	-.257	.366*	.335*
20	RR/Area 1940	.748	.773	.105	.154	.206	.218	-.085	-.129	-.228	.356	.232	.217	-.110	-.485	.026*	.054*
21	RR/Area 1960	.787	.799	-.032	.034	.130	.155	-.069	-.242	-.383	.326	.196	.066	-.082	-.654	-.086*	-.063*
22	Roads/Pop^A 1940	-.816	-.775	.443	.411	.372	.369	.178	.335	.393	-.320	-.126	.167	.337	.460	.524*	.521*
23	Roads/Pop^B 1940	-.528	-.430	.524	.506	.499	.472	.040	.313	.359	-.052	.145	.514	.455	.264	.691*	.673*
24	Roads/Pop 1960	-.807	-.826	.311	.272	.178	.142	.259	.431	.511	-.391	-.277	-.062	.099	.647	.398*	.360*
25	Roads/Area^A 1940	.722	.726	-.010	.066	.110	.123	.063	-.141	-.170	.123	-.012	-.062	-.203	-.045	-.224*	-.146*
26	Roads/Area^B 1940	.467	.526	.086	.154	.198	.176	.113	.173	.105	.076	.007	.124	.085	-.010	.196*	.230*
27	Roads/Area 1960	.817	.841	-.125	-.054	-.013	-.016	.134	-.059	-.120	.047	-.101	-.144	-.153	-.051	-.215*	-.152*
28	Roads/Paved 1960	.084	.155	.458	.470	.597	.607	-.008	-.056	-.103	.379	.484	.514	.303	-.477	.331*	.342*
29	Bicycles/Pop 1940	-.050	-.028	.573	.589	.598	.585	.115	.390	.311	.350	.342	.405	.095	-.310	.309*	.299*
30	Bicycles/Pop 1960	-.069	-.091	.423	.424	.341	.285	.247	.545	.461	.081	-.018	.075	-.165	-.037	.184*	.144*
31	Bicycles 1960-1940	-.035	-.052	.345	.344	.249	.197	.232	-.521	.432	-.025	-.130	-.006	-.171	.002	.220*	.191*

		Population Distribution						and Change									
		Density		Urban				Cap. Dummy	Cap. Urban		Cap. Size		Pop 50,000+	Urban		Born Instate	
		1940	1960	1930	1940	1950	1960	1960	1940	1960	1940	1960	1960	1960/30	1960-50/ 1960-40	1940*	1950*
	Variable Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
32	Autos/Pop 1940	.351	-.239	.677	.679	.703	.727	-.039	.120	.185	.238	.440	.733	.495	-.138	.610*	.609*
33	Autos/Pop 1960	.422	-.311	.689	.691	.723	.784	.084	.232	.317	.190	.426	.699	.546	.264	.582*	.606*
34	Autos/Pop 1960-1939	-.308	-.256	-.173	-.191	-.181	-.125	.268	.333	.256	-.399	-.298	-.252	.359	.082	.095*	.120*
35	Autos/Pop 1960-1940	-.167	-.187	.405	.437	.459	.535	.145	.236	.329	.209	.273	.270	.067	.315	.183*	.213*
61	Devel. Index 1950	.378	.301	....	-.833	....	-.858	....	-.213	-.270	-.319	-.471	-.717	-.373	-.143	-.616*	....
Utilities and communication																	
36	Elect/Capita 1940	.121	.165	.376	.412	.429	.446	-.081	-.156	-.015	.327	.380	.450	.090	.309	.150*	.177*
37	Elect/Capita 1960	-.291	-.220	.422	.428	.386	.434	-.015	.031	.181	.129	.278	.470	.283	.528	.313*	.353*
38	Elect/Capita 1960-1940	-.100	-.073	.407	.424	.406	.514	-.177	-.082	.016	.284	.376	.496	.160	.202	.243*	.321*
39	Movies/Pop 1940	-.662	-.569	.757	.715	.699	.685	.098	.478	.436	.004	.184	.541	.495	.036	.751*	.736*
40	Movies/Pop 1960	-.264	-.207	.691	.690	.739	.785	.014	-.008	.066	.288	.452	.538	.342	.091	.430*	.424*
41	Movies/Pop 1960-1940	.252	.267	.068	.086	.192	.254	-.040	.478	-.376	.245	.333	.174	.090	-.019	-.154*	-.138*
42	Library Use 1940	.117	.131	.514	.520	.543	.545	.157	-.048	.056	.408	.450	.362	-.020	.160	.129*	.190*
43	Running Water 1960	.013	.053	....	.566	....	.638	....	.013	.098	.433	.527	.560	.102	.106	.245*	....*
44	Radio	-.339	-.262	.778	.780	.794	.847	-.062	.123	.211	.230	.417	.686	.398	.218	.600*	.623*
Proportion of males in agriculture																	
79	Ag/EcAct M 1940*	-.436*	-.388*	.899*	.903*	.820*	.803*	-.007*	.402*	.464*	.234*	.328*	.625*	.196*	.357*	.635**	.608**
80	Ag/EcAct M 1960*	-.269*	-.184*	.811*	.847*	.841*	.873*	.039*	.361*	.378*	.299*	.416*	.655*	.390*	.176*	.595**	.607**
Proportion of males without shoes																	
125	Barefoot M 1940	.318	.245	-.662	-.634	-.611	-.628	.039	-.162	-.231	-.253	-.414	-.667	-.302	-.059	-.624*	-.599*
127	Barefoot M 1960	.394	.328	.688	-.662	-.634	-.653	.121	-.149	-.208	-.196	-.342	-.688	-.313	-.044	-.587*	-.563*
Literacy of adults																	
169	Literacy 30-39 MU 1960	-.653	-.628	.461	.450	.344	.355	.058	.406	.462	.216	.322	.533	.246	.289	.600*	.512*
177	Literacy 30-39 FU 1960	-.698	-.669	.571	.553	.461	.479	.039	.358	.435	.149	.301	.534	.285	.294	.672*	.585*
211	Literacy 20-24 MU-F 1960	.415	.390	-.405	-.401	-.407	-.427	-.141	-.189	-.254	-.019	-.162	-.209	-.284	-.215	-.600*	-.528*
221	Literacy 20-24 MR-F 1960	.380	.384	-.454	-.451	-.400	-.450	.047	-.007	.182	-.117	-.254	-.390	-.092	-.424	-.401*	-.369*
Marriage and fertility rates																	
45	Single F 20-24 1960	.258	.199	.391	.411	.385	.416	-.107	-.031	.031	.430	.404	.352	-.324	.272	.025*	.054*

		Population Distribution and Change															
		Density		Urban				Cap. Dummy	Cap. Urban		Cap. Size		Pop 50,000+	Urban		Born Instate	
		1940	1960	1930	1940	1950	1960	1960	1940	1960	1940	1960	1960	1960/30	1960-50/1960-40	1940*	1950*
	Variable Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
46	F under 5 Yrs/F 1940	-.224	-.230	-.596	-.592	-.623	-.599	-.098	-.041	-.117	-.329	-.321	-.275	.129	-.167	-.075*	-.156*
47	F under 5 Yrs/F 1960	-.449	-.372	-.189	-.196	-.265	-.242	.033	.259	.202	-.536	-.418	-.145	.391	.126	.410*	.360*
48	Child/F 40-49 U 1960	-.150	-.186	.001	.016	-.143	-.112	-.104	.102	.134	-.007	-.070	.023	-.175	.165	.138*	.109*
49	Child/F 40-49 R 1960	.011	.062	.306	.359	.314	.337	-.257	-.030	.010	-.113	-.058	.322	.148	.085	.432*	.383*
Employment of youth																	
62	Employ 8-11 M 1960	.338	.266	-.500	-.510	-.507	-.541	-.022	-.345	-.373	.046	-.114	-.511	-.381	-.260	-.629*	-.626*
63	Employ 8-11 F 1960	.328	.244	-.575	-.549	-.527	-.559	.125	-.202	-.265	.003	-.188	-.555	-.362	-.191	-.642*	-.605*
Child enrollment																	
265	Enrol 6-14 T 1937	-.599	-.512	.371	.339	.384	.421	.165	.223	.235	-.165	.069	.301	.593	.207	.710*	.710*
266	Enrol 6-14 T 1960*	.375*	.336*	-.373*	-.404*	-.457*	-.479*	-.131*	-.239*	-.208*	.246*	.115*	-.087*	-.385*	-.162*	-.489	-.481
Changes in youth literacy																	
161	Literacy 10-14 M 1940-30	-.464	-.411	.473	.457	.475	.513	-.056	.154	.204	.140	.327	.498	.387	.039	.548*	.520*
162	Literacy 10-14 F 1940-30	-.536	-.511	.379	.358	.343	.369	.015	.259	.291	.155	.301	.406	.297	.075	.508*	.460*
163	Literacy 10-14 M 1960-40*	-.596*	-.505*	.485*	.436*	.481*	.474*	.039	.257	.291	-.021	.219	.597	.514	.077	.450**	.414**
164	Literacy 10-14 F 1960-40*	-.643*	-.563*	.607*	.554*	.588*	.574*	.083	-.318	.348	.085	.306	.595	.482	.112	.574**	.531**
165	Lit. 6+ 1960-50/1960-40	.466	.363	-.155	-.141	-.114	-.077	-.185	-.342	-.355	.080	-.074	-.269	-.445	-.303	-.321*	-.289*
Continuation rates																	
288	B 4/3 U 1942	.228	.155	.028	.077	.050	.080	-.176	-.268	-.151	.250	.184	.180	-.338	.164	-.202*	-.098*
293	B 4/3 R 1942	-.325	-.292	.250	.254	.237	.248	-.158	.069	.130	-.084	.021	.265	.202	.337	.293*	.398*
296	B 4/3 U-R 1942	.551	.471	-.226	-.192	-.191	-.166	.064	-.225	-.231	.312	.147	-.159	-.450	-.323	-.432*	-.457*
299	B 4/3 U 1960*	-.103*	-.118*	.220*	.194*	.136*	.103*	.099*	.245*	.152*	.438*	.359*	.144*	-.054*	-.241*	.173**	.051**
304	B 4/3 R 1960	-.062	.008	.092	.062	.172	.196	.120	-.087	-.112	-.252	-.101	-.047	.328	-.001	.202*	.362*
307	B 4/3 U-R 1960	.112	.046	-.217	-.173	-.266	-.265	-.126	-.010	.059	.152	.030	.037	-.309	.102	-.282*	-.395*
308	B 4/3 U 1960-1942	-.140	-.058	-.222	-.254	-.185	-.176	.189	.106	.049	-.415	-.298	-.243	.377	-.023	.079*	.060*
309	B 4/3 R 1960-1942	.275	.311	-.135	-.164	-.043	-.018	.273	-.111	-.209	-.125	-.087	-.308	.123	-.364	-.066*	-.003*
330	B 5/1 U 1942	-.346	-.321	.524	.517	.531	.520	-.243	.070	.141	.107	.206	.582	.165	.193	.444*	.505*
331	B 5/1 R 1942	.205	.048	.352	.376	.424	.452	-.212	-.259	-.160	.137	.223	.381	.164	.222	.168*	.295*
332	B 5/1 U 1960*	.372*	.279*	-.331*	-.313*	-.347*	.375*	-.138*	-.294*	-.306*	.195*	.007*	-.340*	-.436*	-.157*	-.610**	-.712**
333	B 5/1 R 1960	-.168	-.027	.438	.436	.502	.533	-.021	.004	.042	-.110	.118	.462	.571	.139	-.571*	.645*

		Transportation																	
		RR/Pop		RR/Area		Roads/Pop			Roads/Area			Roads Paved	Bicycles/Pop			Autos/Pop			
		1940	1960	1940	1960	1940^A	1940^B	1960	1940^A	1940^B	1960	1960	1940	1960	1960-40	1940	1960	1960-39	1960-40
	Variable Number	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Transportation																			
18	RR/Pop 1940	1.000	.504	.607	.639	-.190	.088	-.434	.011	.140	-.056	.622	.549	.271	.241	.179	.040	-.176	-.142
19	RR/Pop 1960	.504	1.000	.084	.178	.411	.191	.279	-.129	-.144	-.397	.423	.475	.302	.256	.306	.297	-.158	.348
20	RR/Area 1940	.607	.084	1.000	.911	-.528	-.093	-.650	.634	.623	.638	.452	.383	.280	.306	.050	-.075	-.435	-.032
21	RR/Area 1960	.639	.178	.911	1.000	-.573	-.327	-.717	.647	.461	.618	.471	.326	.155	.161	-.073	-.173	-.336	-.049
22	Roads/Pop^A 1940	-.190	.411	-.528	-.573	1.000	.613	.824	-.189	-.196	-.476	.064	.109	.133	.129	.492	.562	.162	.273
23	Roads/Pop^B 1940	.088	.191	-.093	-.327	.613	1.000	.462	-.163	.302	-.260	.251	.215	.089	.067	.787	.668	-.249	.077
24	Roads/Pop 1960	-.434	.279	-.650	-.717	.824	.462	1.000	-.386	-.193	-.391	-.313	.005	.242	.256	.240	.368	.312	.335
25	Roads/Area^A 1940	.011	-.129	.634	.647	-.189	-.163	-.386	1.000	.554	.815	.222	.038	.032	.082	-.004	-.040	-.335	.044
26	Roads/Area^B 1940	.140	-.144	.623	.461	-.196	.302	-.193	.554	1.000	.674	.176	.133	.211	.268	.157	.111	-.174	.045
27	Roads/Area 1960	-.056	-.397	.638	.618	-.476	-.260	-.391	.815	.674	1.000	-.047	-.042	.081	.159	-.159	-.154	-.120	.015
28	Roads Paved 1960	.622	.423	.452	.471	.064	.251	-.313	.222	.176	-.047	1.000	.528	.101	-.007	.464	.388	-.343	.135
29	Bicycles/Pop 1940	.549	.475	.383	.326	.109	.215	.005	.038	.133	-.042	.528	1.000	.774	.648	.351	.327	-.145	.299
30	Bicycles/Pop 1960	.271	.302	.280	.155	.133	.089	.242	.032	.211	.081	.101	.774	1.000	.967	-.012	.022	.093	.196
31	Bicycles 1960-1940	.241	.256	.306	.161	.129	.067	.256	.082	.268	.159	-.007	.648	.967	1.000	-.083	-.049	.137	.151
32	Autos/Pop 1940	.179	.306	.050	-.073	.492	.787	.240	-.004	.157	-.159	.464	.351	-.012	-.083	1.000	.906	-.378	.331
33	Autos/Pop 1960	.040	.297	-.075	-.173	.562	.668	.368	-.040	.111	-.154	.388	.327	.022	-.049	.906	1.000	-.044	.624
34	Autos/Pop 1960-1939	-.176	-.158	-.435	-.336	.162	-.249	.312	-.335	-.174	-.120	-.343	-.145	.093	.137	-.378	-.044	1.000	.198
35	Autos/Pop 1960-1940	-.142	.348	-.032	-.049	.273	.077	.335	.044	.045	.015	.135	.299	.196	.151	.331	.624	.198	1.000
61	Devel. Index 1950	.183	....	....	....	....	.600	....	....	.023	-.250	.545	....	.118	....	.863	.871	....	.....
Utilities and communication																			
36	Elect/Capita 1940	-.180	-.063	.175	.057	.151	.437	-.025	.395	.274	.245	.329	-.006	-.314	-.357	.682	.626	-.513	.321
37	Elect/Capita 1960	-.309	-.018	-.188	-.300	.504	.603	.318	.114	.072	-.053	.151	-.067	-.316	-.348	.774	.769	-.237	.296
38	Elect/Capita 1960-1940	.033	.277	.079	.043	.287	.328	.054	.178	.002	-.066	.283	.152	-.171	-.207	.618	.634	-.278	.437
39	Movies/Pop 1940	.232	.420	-.178	-.276	.581	.565	.534	-.433	-.119	-.418	.307	.571	.433	.360	.580	.632	.179	.333
40	Movies/Pop 1960	.090	.348	-.039	-.046	.399	.440	.224	.034	.006	-.122	.464	.275	-.003	-.095	.679	.706	-.193	.456
41	Movies/Pop 1960-1940	-.076	-.017	.096	.185	-.061	.083	-.240	.366	.097	.208	.248	-.260	-.511	-.562	.309	.259	-.386	.088
42	Library Use 1940	.036	.136	.317	.197	.205	.404	-.006	.451	.282	.209	.495	.228	-.015	-.089	.553	.478	-.574	.239

		Transportation																	
		RR/POP		RR/Area		Roads/Pop			Roads/Area			Roads Paved	Bicycles/Pop			Autos/Pop			
		1940	1960	1940	1960	1940^A	1940^B	1960	1940^A	1940^B	1960	1960	1940	1960	1960-40	1940	1960	1960/39	1960-40
	Variable Number	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
43	Running Water 1960	.055	....	....	....	....	.277	....	....	.211	.032	.526	....	-.097	....	.468	.512	....	....
44	Radio 1960	.102	.402	.024	-.056	.465	.551	.328	-.016	.075	-.112	.375	.296	.036	-.003	.805	.875	-.116	.601
Proportion of males in agriculture																			
79	Ag/EcAct M 1940*	.034*	.390*	-.010*	-.146*	.578*	.611*	.478*	-.050*	.058*	-.174*	.326*	.496*	.351*	.298*	.775*	.789*	-.169*	.506*
80	Ag/EcAct M 1960*	.134*	.373*	.097*	.041*	.443*	.491*	.304*	.073*	.146*	-.009*	.422*	.539*	.267*	.195*	.797*	.887*	-.044*	.658*
Proportion of males without shoes																			
125	Barefoot M 1940	-.290	-.297	-.123	.042	-.445	-.697	-.182	.004	-.065	.226	-.446	-.293	-.089	-.081	-.703	-.597	.334	-.143
127	Barefoot M 1960	-.306	-.353	-.055	.097	-.440	-.701	-.232	.142	-.028	.312	-.398	-.414	-.190	-.147	-.733	-.626	.309	-.194
Literacy of adults																			
169	Literacy 30-39 MU 1960	.016	.399	-.313	-.386	.564	.572	.548	-.433	-.175	-.501	.116	.220	.132	.100	.628	.614	-.032	.315
177	Literacy 30-39 FU 1960	.064	.474	-.290	-.382	.645	.627	.599	-.412	-.189	-.520	.196	.274	.174	.144	.656	.662	-.019	.368
211	Literacy 20-24 MU-F 1960	-.061	-.434	.098	.131	-.519	-.528	-.491	.081	-.165	.167	-.223	-.236	-.151	-.144	-.501	-.521	.003	-.378
221	Literacy 20-24 MR-F 1960	.155	-.313	.166	.259	-.518	-.456	-.432	.017	.064	.212	-.135	.009	.082	.055	-.524	-.558	.174	-.441
Marriage and fertility rates																			
43	Single F 20-24 1960	-.078	.140	.371	.247	-.018	.132	-.083	.424	.200	.247	.292	.089	-.056	-.049	.345	.334	-.531	.466
46	F under 5 Yrs/F 1940	.047	-.022	-.332	-.187	-.072	-.250	.028	-.470	-.354	-.350	-.398	-.246	-.160	-.136	-.342	-.340	.394	-.307
47	F under 5 Yrs/F 1960	-.021	-.018	-.343	-.340	.414	.216	.379	-.275	-.120	-.245	.370	-.170	.032	.163	.012	.027	.465	-.181
48	Child/F 40-49 U 1960	.042	.158	.007	-.073	.231	.089	.141	.019	-.148	-.169	-.311	-.007	.142	.258	-.006	-.079	-.079	-.072
49	Child/F 40-49 R 1960	.190	.279	.306	.256	.227	.318	.049	.290	.317	.148	.151	.122	.106	.193	.388	.345	-.145	.145
Employment of youth																			
62	Employ 8-11 M 1960	-.069	-.340	-.030	-.052	-.559	-.612	-.415	-.094	-.269	.037	-.258	.274	-.135	-.112	-.629	-.700	-.043	-.409
63	Employ 8-11 F 1960	-.196	-.240	-.115	.071	-.418	-.685	-.252	.055	-.248	.157	-.313	-.250	-.144	-.136	-.632	-.623	.076	-.223
Child enrollment																			
164	Enrol 6-14 T 1937	.025	.336	-.295	-.310	.578	.501	.610	-.324	-.015	-.252	.106	.099	-.010	-.021	.516	.636	.306	.428
165	Enrol 6-14 T 1960*	-.007*	-.451*	.159*	.065*	-.512*	-.281*	-.541*	.027*	-.144*	.031*	-.227*	-.265*	-.208*	-.163*	-.339*	-.513*	-.347*	-.520*

		Transportation																	
		RR/Pop		RR/Area		Roads/Pop			Roads/Area			Roads Paved	Bicycles/Pop			Autos/Pop			
		1940	1960	1940	1960	1940^A	1940^B	1960	1940^A	1940^B	1960	1960	1940	1960	1960-40	1940	1960	1960/39	1960-40
	Variable Number	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Changes in youth literacy																			
161	Literacy 10-14 M 1940-30	.126	.388	-.213	-.194	.367	.294	.342	-.343	-.351	-.343	.274	.224	-.045	-.095	.536	.607	.029	.432
162	Literacy 10-14 F 1940-30	.089	.405	-.289	-.274	.334	.225	.418	-.508	-.386	-.435	.178	.239	.056	.002	.421	.510	.124	.442
163	Literacy 10-14 M 1960-40*	.088*	.184*	-.313*	-.376*	.413*	.520*	.394*	-.515*	-.185*	-.446*	.224*	.286*	.055*	-.086*	.599*	.652*	.105*	.275*
164	Literacy 10-14 F 1960-40*	.112*	.282*	-.287*	-.382*	.496*	.580*	.475*	-.495	-.207	-.465*	.315*	.328*	.115*	-.003*	.662*	.697*	.016*	.361*
165	Lit. 6+ 1960-50/1960-40	.207	.257	.382	.480	-.386	-.531	-.313	.328	-.134	.292	-.031	.125	.100	.135	-.319	-.327	-.272	.151
Continuation rates																			
288	B 4/3 U 1942	-.156	.154	.156	.168	-.134	-.126	-.075	.233	.024	.182	-.007	-.087	-.196	-.160	.122	.113	-.367	.310
293	B 4/3 R 1942	-.175	.044	-.203	-.310	.374	.479	.320	-.104	.029	-.170	.046	.021	-.177	-.197	.445	.439	-.072	.166
296	B 4/3 U-R 1942	.188	.135	.429	.543	-.520	-.595	-.436	.325	.049	.351	.000	.023	.147	.199	-.392	-.392	-.176	.045
299	B 4/3 U 1960*	.358*	.203*	.119*	.086*	-.096*	-.103*	-.066*	-.292*	-.096*	-.256*	.136*	.333*	.332*	.290*	.129*	-.024*	-.204*	-.094*
304	B 4/3 R 1960	.110	.095	.116	.027	.236	.308	.099	.175	.304	.107	.210	-.004	-.077	-.042	.120	.188	.117	.019
307	B 4/3 U-R 1960	-.279	-.188	-.187	-.066	-.208	-.379	-.087	-.055	-.283	-.009	-.273	-.182	-.121	-.136	-.158	-.166	-.056	.039
308	B 4/3 U 1960-1942	-.080	-.275	-.233	.207	.192	.030	.083	-.008	.045	-.016	-.059	-.197	-.106	-.107	-.202	-.094	.469	-.237
309	B 4/3 R 1960-1942	.341	.102	.367	.374	-.132	-.147	-.232	.306	.307	.284	.195	.054	.158	.212	-.308	-.236	.188	-.140
330	B 5/1 U 1942	.027	.406	-.060	-.125	.414	.435	.300	-.089	-.028	-.236	.338	.263	-.039	-.099	.628	.611	-.295	.395
331	B 5/1 R 1942	-.145	.083	.037	.003	.253	.332	.024	.319	.182	.103	.330	-.082	-.399	-.428	.506	.500	-.312	.203
332	B 5/1 U 1960*	-.068*	-.258*	.064*	.152*	-.533*	-.421*	-.417*	-.003*	-.167*	.056*	-.216*	-.215*	-.087*	-.123*	-.395*	-.507*	-.184*	-.339*
333	B 5/1 R 1960	.101	.051	.123	-.020	.392	.680	.166	.186	.351	.116	.328	.068	-.170	-.162	.671	.667	-.084	.140

		Utilities and Communication									
		Devel. Index	Electricity/Capita			Movies/Pop			Library Use	Water	Radio
		1950	1940	1960	1960-40	1940	1960	1960-40	1940	1960	1960
	Variable Number	61	36	37	38	39	40	41	42	43	55
61	Devel. Index 1950	1.000	.549	.656	....	.716	.694	....	.507	.564	.859
Utilities and communication											
36	Elect/Capita 1940	.549	1.000	.782	.477	.044	.514	.553	.738	.539	.511
37	Elect/Capita 1960	.656	.782	1.000	.715	.268	.498	.385	.540	.421	.644
38	Elect/Capita 1960-1940	....	.477	.715	1.000	.207	.529	.396	.439	....	.690
39	Movies/Pop 1940	.716	.044	.268	.207	1.000	.504	-.286	.162	.259	.626
40	Movies/Pop 1960	.694	.514	.498	.529	.504	1.000	.621	.518	.579	.778
41	Movies/Pop 1960-1940	....	.553	.385	.396	-.286	.621	1.000	.442	....	.323
42	Library Use 1940	.507	.738	.540	.439	.162	.518	.442	1.000	.655	.451
43	Running Water 1960	.564	.539	.421	....	.259	.579	....	.655	1.000	.647
44	Radio 1960	.859	.511	.644	.690	.626	.778	.323	.451	.647	1.000
Proportion of males in agriculture											
79	Ag/EcAct M 1940*	-.885*	.434*	.600*	.544*	.755*	.639*	.007*	.434*	.502*	.843*
80	Ag/EcAct M 1960*	-.902*	.496*	.609*	.615*	.693*	.661*	.099*	.437*	.509*	.880*
Proportion of males without shoes											
125	Barefoot M 1940	-.620	-.415	-.467	-.467	-.513	-.628	-.258	-.477	-.543	-.702
127	Barefoot M 1960	-.681	-.310	-.451	-.528	-.609	-.595	-.155	-.361	-.435	-.719
Literacy of Adults											
169	Literacy 30-39 MU 1960	....	.186	.475	.435	.610	.478	-.068	.083	.148	.601
177	Literacy 30-39 FU 1960	....	.215	.475	.428	.684	.586	-.009	.149	.234	.699
211	Literacy 20-24 MU-F 1960	....	-.299	-.328	-.216	-.396	-.606	-.235	-.241	....	-.546
221	Literacy 20-24 MR-F 1960	....	-.450	-.487	-.437	-.300	-.685	-.397	-.335	-.492	-.707
Marriage and fertility rates											
45	Single F 20-24 1960	-.409	.595	.360	.506	-.045	.443	.421	.631	.645	.542

		Utilities and Communication									
			Electricity/Capita			Movies/Pop			Library Use	Water	Radio
		1950	1940	1960	1960-40	1940	1960	1960-40	1940	1960	1960
	Variable Number	61	36	37	38	39	40	41	42	43	55
46	F under 5 Yrs/F 1940	.419	-.539	-.308	-.286	-.175	-.509	-.342	-.769	-.717	-.443
47	F under 5 Yrs/F 1960	.153	-.339	.022	-.109	.142	-.300	-.443	-.538	-.509	-.082
48	Child/F 40-49 U 1960	....	.146	-.019	.148	-.009	-.155	-.237	-.153	....	.033
49	Child/F 40-49 R 1960	....	.188	.233	.334	.068	.177	.095	.032	....	.446
Employment of youth											
62	Employ 8-11 M 1960	.604	-.317	-.568	-.567	-.483	-.510	-.166	-.219	-.312	-.684
63	Employ 8-11 F 1960	.600	-.282	-.485	-.485	-.472	-.535	-.194	-.228	-.316	-.653
Child enrollment											
265	Enrol 6-14 T 1937	-.484*	.190	.403	.254	.623	.514	.061	.088	.222	.620
266	Enrol 6-14 T 1960*	.427	-.062*	-.262*	-.251*	-.491*	-.475*	-.064*	-.050*	-.133*	-.526*
Changes in youth literacy											
161	Literacy 10-14 M 1940-30	....	.216	.360	.415	.610	.573	.035	.170	.297	.686
162	Literacy 10-14 F 1940-30	....	.066	.258	.314	.627	.449	-.036	.009	....	.559
163	Literacy 10-14 M 1960-40*	....	.187*	.373*	.169*	.733*	.428*	-.016*	.126*	.190*	.525*
164	Literacy 10-14 F 1960-40*	....	.257*	.398*	.208*	.823*	.578*	-.002*	.267*	....	.635*
165	Lit. 6+ 1960-50/1960-40	....	-.106	-.369	.079	-.280	-.070	.060	.082	....	-.155
Continuation rates											
288	B 4/3 U 1942	....	.273	.195	.401	-.157	.060	.166	.188	....	.317
293	B 4/3 R 1942	-.450	.374	.573	.390	.342	.177	-.021	.221	.229	.412
296	B 4/3 U-R 1942	.352	-.238	-.491	-.085	-.457	-.141	.119	-.104	-.004	-.199
299	B 4/3 U 1960*	....	-.186*	-.172*	-.023*	.244*	.135*	-.118*	-.040	....	.039
304	B 4/3 R 1960	-.079	.137	.203	.097	.101	-.001	.040	.266	.292	.140
307	B 4/3 U-R 1960	.146	-.024	-.113	-.060	-.223	-.007	.061	-.234	-.243	-.147
308	B 4/3 U 1960-1942	....	-.100	-.060	-.353	-.053	-.084	.003	-.103	-.245	-.344
309	B 4/3 R 1960-1942	....	-.234	-.342	-.232	-.216	-.160	.048	.051	.054	-.246
330	B 5/1 U 1942	-.735	.400	.514	.564	.521	.435	.037	.369	.501	.653
331	B 5/1 R 1942	-.464	.714	.649	.505	.103	.491	-.489	.609	.622	.519
332	B 5/1 U 1960*	-.508*	-.225*	-.380*	-.300*	-.530*	-.224*	.201*	-.224*	-.375*	-.414*
333	B 5/1 R 1960	.447	.578	.648	.415	.351	.425	.287	.449	-.293	.586

		Marriage and Fertility Rates								
		Single F 20-24	F under 5 Yrs		Child/ F 40-49 U	Child/ F 40-49 R	Employ 8-11 M	Employ 8-11 F	Enrollment 6-14 T	
		1960	1940	1960	1960	1960	1960	1960	1937	1960*
	Variable Number	45	46	47	48	49	62	63	265	266
Marriage and fertility rates										
45	Single F 20-24 1960	1.000	-.680	-.477	.121	.311	-.234	-.310	.021	-.038*
46	F under 5 Yrs/F 1940	-.680	1.000	.610	.210	.019	.106	.214	.070	.038*
47	F under 5 Yrs/F 1960	-.477	.610	1.000	.529	.413	-.202	-.167	.269	-.125*
48	Child/F 40-49 U 1960	.121	.210	.529	1.000	.496	-.043	-.061	-.095	.292*
49	Child/F 40-49 R 1960	.311	.019	.413	.496	1.000	-.552	-.544	.177	-.251*
Child employment										
62	Employ 8-11 M 1960	-.234	.106	-.202	-.043	-.552	1.000	.827	-.651	.709*
63	Employ 8-11 F 1960	-.310	.214	-.167	-.061	-.544	.827	1.000	-.476	.457*
Child enrollment										
265	Enrol 6-14 T 1937	.021	.070	.269	-.095	.177	-.651	-.476	1.000	-.738*
266	Enrol 6-14 T 1960*	-.038*	.038*	-.125*	.292*	-.251*	.709*	.457*	-.738*	1.000**
Changes in youth literacy										
161	Literacy 10-14 M 1940-30	.207	.063	.039	-.034	.179	-.452	-.363	.627	-.413*
162	Literacy 10-14 F 1940-30	.077	.084	.071	-.093	.024	-.393	-.299	.638	-.442*
163	Literacy 10-14 M 1960-40	-.117	.048	-.007	-.328	-.048	-.455	-.420	.582	-.416*
164	Literacy 10-14 F 1960-40	.066	-.156	-.061	-.264	-.094	-.426	-.442	.656	-.419*
165	Lit. 6+ 1960-50/1960-40	.307	-.193	-.340	.143	-.038	.317	-.345	-.388	.234*

		Marriage and Fertility Rates								
		Single F 20-24	F under 5 Yrs		Child/ F 40-49 U	Child/ F 40-49 R	Employ 8-11 M	Employ 5-11 F	Enrollment 6-14 T	
		1960	1940	1960	1960	1960	1960	1960	1937	1960*
	Variable Number	45	46	47	48	49	62	63	265	266
	Continuation rates									
288	B 4/3 U 1942	.601	-.252	-.326	.099	.171	-.066	.087	-.043	-.015*
293	B 4/3 R 1942	.217	-.161	.012	-.100	-.001	-.436	-.394	.413	-.353*
296	B 4/3 U-R 1942	.201	-.048	-.247	.189	.138	.429	.419	-.498	.334*
299	B 4/3 U 1960*	-.038*	-.019*	-.014*	.193*	-.128*	.185*	-.047*	-.075*	.213**
304	B 4/3 R 1960	-.006	-.247	-.044	-.199	.001	-.291	-.222	.290	-.250*
307	B 4/3 U-R 1960	.051	.269	.037	.139	.032	.240	.238	-.248	.193*
308	B 4/3 U 1960-1942	-.538	.248	.297	-.200	-.133	-.019	-.001	.106	-.075*
309	B 4/3 R 1960-1942	-.205	-.117	-.053	-.085	.005	.135	.098	-.132	.064*
330	B 5/1 U 1942	.369	-.242	-.177	-.103	.206	-.573	-.386	.474	-.404*
331	B 5/1 R 1942	.470	-.479	-.346	-.194	.162	-.414	-.280	.293	-.249*
332	B 5/1 U 1960*	-.035*	.112*	-.222*	.008*	-.213*	.552*	.308*	-.571*	.463**
333	B 5/1 R 1960	.191	-.279	.113	-.045	.432	-.657	-.589	.544	-.363*

TABLE 58

CORRELATION MATRIX: OCCUPATIONAL AND ECONOMIC CHARACTERISTICS AGAINST POPULATION, TRANSPORTATION, UTILITY AND COMMUNICATION, AND SELECTED OTHER VARIABLES

		Population Distribution and Change												
		Density		Urban		Capital/Urban		Capital Size		Pop 50,000+	Urban		Born Instate	
		1940	1960	1940	1960	1940	1960	1940	1960	1960	1960/1930	1960-1950/ 1960-1940	1940*	1960
	Variable Number	1	2	4	6	8	9	10	11	12	13	14	15	17
Labor force participation														
58	EcAct F 10+ 1940	-.016	.047	.463	.511	.341	.374	.295	.405	.282	.204	.186	.347*	-.370
59	EcAct F 12+ 1960	-.018	.058	.060	.210	.169	.162	.017	.148	.124	.359	.068	.310*	-.429
60	EcAct F 1960-1940	....	.153	-.305	....	-.206	....	-.096	....	.022	.228	-.107	.004*	....
61	Devel. Index 1950	-.378	-.301	.833	.858	.213	.270	.319	.471	.717	.373	.143	-.611*	-.557
White collar and professional workers														
64	Collar/EcAct M 1940	-.624	-.534	-.763	.709	.503	.515	.049	.221	.541	.464	.309	.750*	-.749
65	Collar/EcAct M 1960	-.367	-.269	.808	.860	.382	.395	.335	.506	.732	....	....	.628*	-.611
66	Collar/EcAct M 1960-1940	....	.083	.683	....	.113	....	.547	....	.756	.377	-.202	.372*	.355
67	Collar/EcAct F 1940	-.726	-.655	.586	.611	.211	.278	-.037	.200	.545	.510	.255	.671*	-.629
68	Collar/EcAct F 1960	-.262	-.191	.729	.820	.087	.170	.336	.521	.722	....	....	.575*	-.426
69	Collar/EcAct F 1960-1940	....	.786	-.002	....	-.220	....	.480	....	.054	-.329	-.320	-.328*	....
70	Clerk/EcAct T 1960	....	-.488	.719	....	.406	....	.206	....	.671	.508	.142	.697*	.526
71	Clerk/EcAct M 1960	-.582	-.494	.725	.753	.428	.445	.198	.397	.659	....	....	.695*	-.673
72	Clerk/EcAct F 1960	-.565	-.490	.688	.739	.297	.346	.231	.446	.695	....	....	.671*	-.578
74	Prof/EcAct M 1960	-.323	-.238	.559	.666	.316	.357	.205	.404	.546	.496	.143	.552*	-.568
75	Prof/EcAct F 1960	-.231	-.263	.646	.587	.139	.272	.060	.089	.242	-.064	.498	.260*	-.123
Public administration														
77	P.A./EcAct M 1940	....	-.536	.522	....	.485	....	-.247	....	.252	.517	.375	.668*	....
Agriculture														
81	Ag/EcAct M 1960-1940	....	-.316	-.134	....	-.031	....	.320	....	-.355	-.552	.423	-.158*	-.269
82	Ejidos/AgPop 1940	.208	.158	.100	.089	-.100	-.154	-.090	-.198	-.264	-.167	-.121	-.005*	.173
83	AgLabor/Ag M 1940	.209	.247	-.207	-.134	-.083	-.180	-.138	-.161	-.148	.117	.249	.198*	-.072
84	AgLabor/Ag M 1960	.072	.191	.284	.392	-.078	-.037	.060	.216	.379	.392	.103	.394*	-.416

		Population Distribution and Change												
		Density		Urban		Capital/Urban		Capital Size		Pop 50,000+	Urban		Born Instate	
		1940	1960	1940	1960	1940	1960	1940	1960	1960	1960/1930	1960-1950/ 1960-1940	1940*	1960
	Variable Number	1	2	4	6	8	9	10	11	12	13	14	15	17
85	AgProp/Ag M 1940	-.411	-.395	-.037	-.038	.087	.152	-.018	.127	.092	.150	.255	-.058*	-.138
86	AgProp/Ag M 1960	-.052	-.172	-.265	-.372	.091	.043	-.034	-.195	-.359	-.399	-.132	-.373*	.416
87	AgProp/Ag M 1960-1940	....	.072	-.184	....	.029	....	.006	....	-.341	-.148	-.288	-.260*	....
88	Equip/Land 1950	.198	.260	.272	.342	-.298	-.205	.167	.264	.525	....	....	.350*	-.172
89	Farm Mechanized 1950	-.434	-.376	.598	.664	.083	.097	-.069	.147	.561	.558	.042	.813*	-.692
91	Ag Inc. under $500 1960*	-.729*	-.619*	.483*	.551*	.243*	.324*	-.114*	.190*	.503*	.606*	.330*	.675**	-.736*
94	Returns Glick 1940-1930	....	-.529	.234	....	.127	....	-.339	....	.256	.658	-.078	.770*	....
Manufacturing and mining														
96	Mfg/EcAct M 1940	.068	.104	.821	.775	.297	.335	.401	.404	.506	....	....	.264*	-.206
97	Mfg/EcAct M 1960	.163	.223	.661	.713	.215	.207	.499	.515	.591	....	....	.300*	-.240
98	Mfg/EcAct M 1960-1940	....	....	.203	....	....	....	....	....	.441	.182	-.250	.162*	....
100	Mfg F/M+F Mfg 1940	-.049	-.125	-.242	-.238	.062	.099	.316	.276	-.136	....	....	-.296*	.264
101	Mfg F/M+F Mfg 1960	.214	.176	-.337	-.337	.001	.013	.222	.164	-.155	....	....	-.422*	.307
103	Mfg Inc under $500 1960	.550	.428	-.421	-.527	-.209	-.257	.048	-.226	-.554	-.653	-.211	-.706*	-.738
105	Pay/Emp Fact 1930	....	-.183	.478	....	.060	....	.017	....	.687	.600	.030	.570*	....
106	Pay/Emp Fact 1940	-.140	-.110	.124	.147	-.022	.001	.266	.331	.500	....	....	.400*	-.222
107	Pay/Emp Fact 1950	....	-.003	.261	....	-.306	....	.183	....	.552	.428	.085	.308*	.465
108	Pay/Emp Fact 1955	-.169	-.123	.144	.152	-.272	-.238	.074	.159	.281	....	....	.259*	-.221
109	Pay/Emp Fact 1955/1940	....	.050	.233	....	....	....	....	....	-.064	.049	.122	.005*	.050
Mining														
111	Mining/EcAct M 1940	....	-.292	.137	....	-.311	....	.178	....	.266	-.090	.323	.128*	....

		Transportation									
		RR/Pop	Roads/Pop			Roads Paved	Bicycles/Pop			Autos/Pop	
		1940	1940^A	1940^B	1960	1960	1940	1960	1960-40	1940	1960
	Variable Number	18	22	23	24	28	29	30	31	32	33
Labor force participation											
58	EcAct F 10+ 1940	-.070	....	.235	....	.271	.180	.052	.051	.435	....
59	EcAct F 12+ 1960	-.043	....	.223	....	.083	-.006	-.216	.075	.297	....
60	EcAct F 1960-1940	.041	....	.034	....	-.029	-.144	-.381	-.360	.050	....
61	Devel. Index 1950	.183	....	.600	....	.545	....	.118	....	.863	....
White collar and professional workers											
64	Collar/EcAct M 1940	.043	....	.639	....	.258	.432	.352	.302	.724	.802
65	Collar/EcAct M 1960	....	....	....	....	....	....	....	....	....	.894
66	Collar/EcAct M 1960-1940	.368	....	.300	....	.658	.507	.081	-.034	.734	....
67	Collar/EcAct F 1940	....	....	....	....	....	.275	....	-.016	....	.805
68	Collar/EcAct F 1960	....	....	....	....	....	....	....	....	....	.848
69	Collar/EcAct F 1960-1940	.172	....	-.387	....	.219	.507	-.032	-.034	-.133	....
70	Clerk/EcAct T 1960	.164	....	.589	....	.422	.463	.209	.126	.799	....
71	Clerk/EcAct M 1960	....	....	....	....	....	....	....	....	....	.869
72	Clerk/EcAct F 1960	....	....	....	....	....	....	....	....	....	.851
74	Prof/EcAct M 1960	.062	....	.521	....	.357	....	.033	....	.701	.822
75	Prof/EcAct F 1960	-.223	....	.368	....	.187	....	.238	....	.458	.569
Public administration											
77	P.A./EcAct M 1940	-.114	....	.553	....	.021	....	.296	....	.518	....
Agriculture											
81	Ag/EcAct M 1960-1940	-.378	....	.028	....	-.421	-.310	.136	.224	-.331	....
82	Ejidos/AgPop 1940	.227	....	-.020	....	.068	.323	.391	.379	-.009	....
83	AgLabor/Ag M 1940	.152	....	-.070	....	-.009	-.274	-.282	-.136	-.098	....
84	AgLabor/Ag M 1960	.018	....	.412	....	.267	-.112	-.320	-.244	.617	....

		Transportation									
		RR/Pop	Roads/Pop			Roads Paved	Bicycles/Pop			Autos/Pop	
		1940	1940^A	1940^B	1960	1960	1940	1960	1960-40	1940	1960
	Variable Number	18	22	23	24	28	29	30	31	32	33
85	AgProp/Ag M 1940	-.313	....	.053	....	-.077	-.218	-.277	-.306	.075	....
86	AgProp/Ag M 1960	.031	....	-.409	....	-.230	.159	.355	.276	-.612	....
87	AgProp/Ag M 1960-1940	.249	....	-.362	....	-.151	.300	.493	.445	-.529	....
89	Farm Mechanized 1950	.296	....	.678	....	.427	.249	.032	.052	.768	....
91	Ag Inc under $500 1960*	-.041*	....	.667*	....	.197*	.054*	-.088*	-.090*	.731*	....
94	Returns Glick 1950-1930	.264	....	.337	....	.129	.091	-.006	.025	.322	....
Manufacturing and mining											
98	Mfg/EcAct M 1960-1940	....	....	....	....	....	.494	....	.075	.393	....
103	Mfg Inc under $500 1960	-.072	....	-.617	....	-.256	....	.096	....	-.767	....
105	Pay/Emp Fact 1930	.204	....	.614	....	.402	....	-.116	....	.817	....
107	Pay/Emp Fact 1950	.032	....	.487	....	.350	....	-.527	....	.761	....
109	Pay/Emp Fact 1955-1940	....	....	....	....	....	.115	-.065	-.123	.314	....
Mining											
111	Mining/EcAct 1940	-.145	....	.315	....	.053	....	-.368	....	.440	....

		Utility and Communication						Facilities		
		Electricity per Capita			Movies/Pop			Library Use	Water	Radio
		1940	1960	1960-40	1940	1960	1960-40	1940	1960	1960
	Variable Number	36	37	38	39	40	41	42	43	44
Labor force participation										
58	EcAct F 10+ 1940	.488	.358	.178	.368	.432	.148	.530	.610	.508
59	EcAct F 12+ 1960	.397	.350	.201	.226	.079	-.031	.216	.336	.340
60	EcAct F 1960-1940	.163	.157	.191	-.106	-.223	-.037	-.057	.000	-.001
White collar and professional workers										
64	Collar/EcAct M 1940	.248	.517	.380	.862	.584	-.120	.239	.329	.765
65	Collar/EcAct M 1960	.419	.543	....	.764	.743	....	....	.505	.869
66	Collar/EcAct M 1960-1940	.510	.436	.576	.470	.761	.426	.491	.612	.784
67	Collar/EcAct F 1940	.319	.591	.478	.694	.644	.124	.218	.292	.760
68	Collar/EcAct F 1960	.578	.581	....	.525	.834	....	....	.633	.890
69	Collar/EcAct F 1960-1940	.227	-.196	.038	-.427	.040	.356	.360	.337	-.072
70	Clerk/EcAct T 1960	.318	.524	.500	.804	.677	.037	.271	.438	.839
71	Clerk/EcAct M 1960	.296	.509	....	.819	.657	....	....	.417	.825
72	Clerk/EcAct F 1960	.338	.535	....	.720	.741	....	....	.460	.824
74	Prof/EcAct M 1960	.445	.533	....	.561	.605	....	.254	.401	.766
75	Prof/EcAct F 1960	.442	.468	....	.306	.583	....	.435	.342	.646
Public administration										
77	P.A./EcAct M 1940	.098	.429	....	.749	.345	....	.036	.086	.532
Agriculture										
81	AG/EcAct M 1960-1940	-.250	-.207	.544	-.152	-.276	.007	-.189	.502	-.386
82	Ejidos/AgPop 1940	.043	-.118	.004	-.052	.070	.018	.139	-.361	-.078
83	AgLabor/Ag M 1940	-.038	.693	.003	-.162	-.063	.052	-.202	.021	-.050
84	AgLabor/Ag M 1960	-.093	.674	.444	.107	.424	.438	.364	.460	.533

		Utility and Communication						Facilities		
		Electricity per Capita			Movies/Pop			Library Use	Water	Radio
		1940	1960	1960-40	1940	1960	1960-40	1940	1960	1960
	Variable Number	36	37	38	39	40	41	42	43	44
85	AgProp/Ag M 1940	-.074	.216	.062	.137	.014	-.024	-.101	.177	.130
86	AgProp/Ag M 1960	-.707	-.680	-.413	-.094	-.412	-.442	-.365	-.454	-.521
87	AgProp/Ag M 1960-1940	-.570	-.721	-.382	-.134	-.344	-.378	-.270	-.531	-.491
88	Equip/Land 1950	.585	.486	....	.013	.239	....	....	.462	.512
89	Farm Mechanized 1950	.414	.497	.424	.657	.640	.158	.362	.486	.765
91	Ag Inc under $500 1960*	.294*	.657*	.511*	.668*	.598*	.122*	.251*	.408*	.755*
94	Returns Glick 1950-1930	-.176	.139	.129	.651	.324	-.140	-.232	.085	.446
Manufacturing and mining										
96	Mfg/EcAct M 1940	.434	.405	....	.448	.483	....	....	.553	.620
97	Mfg/EcAct M 1960	.468	.374	....	.385	.436	....	....	.424	.580
98	Mfg/EcAct M 1960-1940	.273	....	.405	.133	....	.093	.249	....	.290
100	Mfg F/M+F Mfg 1940	-.186	-.273	....	-.055	-.050	....	....	.234	-.189
101	Mfg F/M+F Mfg 1960	-.057	-.278	....	-.278	-.245	....	....	.271	-.388
103	Mfg Inc under $500 1960	-.358	-.665	....	-.609	-.548	....	-.140	-.303	-.760
105	Pay/Emp Fact 1930	.507	.704	....	.568	.446	....	.315	.230	.602
106	Pay/Emp Fact 1940	.288	.346	....	.209	.173	....	....	.243	.378
107	Pay/Emp Fact 1950	.681	.731	....	.146	.533	....	.442	.378	.598
108	Pay/Emp Fact 1955	.254	.449	....	.039	.217	....	....	.072	.329
109	Pay/Emp Fact 1955/1940	.333	....	.183	.028	....	.231	.539	....	.102
Mining										
111	Mining/EcAct M 1940	.504	.597	....	.044	.371	....	.332	.335	.420

		Marriage and Fertility Rates and Child Employment				
		Single F 20-24	F Under 5 Yrs		Employ 8-11 M	Employ 8-11 F
		1960	1940	1960	1960	1960
	Variable Number	45	46	47	62	63
Labor force participation						
58	EcAct F 10+ 1940	.439	-.640	-.233	-.252	....
59	EcAct F 12+ 1960	.228	-.294	-.057	-.169	-.022
60	EcAct F 1960-1940	-.023	.....	-.055	.015	.187
61	Devel. Index 1950	.409	-.419	-.153	-.604	-.600
White collar and professional workers						
64	Collar/EcAct M 1940	.114	-.207	.204	-.665	-.610
65	Collar/EcAct M 1960	.301	-.353	-.048	-.648	....
66	Collar/EcAct M 1960-1940	.450	....	-.329	-.490	-.435
67	Collar/EcAct F 1940	.160	-.022	.268	-.754	....
68	Collar/EcAct F 1960	.568	-.443	-.147	-.677	....
69	Collar/EcAct F 1960-1940	.463	....	-.605	.330	.226
70	Clerk/EcAct 1960	.209	....	.083	-.680	-.599
71	Clerk/EcAct M 1960	.180	-.188	.095	-.666	....
72	Clerk/EcAct F 1960	.278	-.174	.061	-.715	....
74	Prof/EcAct M 1960	.293	-.233	-.046	-.662	-.583
75	Prof/EcAct F 1960	.554	-.422	-.097	-.618	-.547
Public administration						
77	P.A./EcAct M 1940	-.131	....	.397	-.535	-.440
Agriculture						
79	Ag M/EcAct 1940*	.431*	-.438*	.009*	-.668*	.003*
80	Ag M/EcAct 1960*	.385*	-.408*	-.038*	-.679*	-.013*
81	Ag M/EcAct M 1960-1940	-.049	....	-.138	-.210	-.004
82	Ejidos/AgPop 1940	.007	-.031	-.005	-.119	-.067
83	AgLabor/Ag M 1940	.091	-.072	.213	.169	-.283
84	AgLabor/Ag M 1960	.380	-.408	.078	-.404	-.276
85	AgProp/Ag M 1940	-.159	.170	.050	-.141	.030
86	AgProp/Ag M 1960	-.367	.394	-.091	.356	.274
87	AgProp/Ag M 1960-1940	-.213	....	-.082	-.190	.204
88	Equip/Land 1950	.645	-.312	-.008	-.406	....
89	Farm Mechanized 1950	.322	-.269	.224	-.584	-.095
91	Ag Inc under $500 1960*	.134*	-.139*	.327*	-.644*	-.170*
94	Returns Glick 1950-1930	-.180	....	.462	-.409	-.461
Manufacturing and mining						
96	Mfg/EcAct M 1940	.484	-.623	-.298	-.408	....
97	Mfg/EcAct M 1960	.405	-.380	-.229	-.442	....
98	Mfg/EcAct M 1960-1940	....	....	....	-.283	-.112
100	Mfg F/M+F Mfg 1940	.079	-.166	-.346	.541	....
101	Mfg F/M+F Mfg 1960	-.029	-.243	-.423	.581	....
103	Mfg Inc under $500 1960	-.139	.028	-.302	.726	.670
105	Pay/Emp Fact 1930	.053	....	.156	-.604	-.581
106	Pay/Emp Fact 1940	.344	-.020	.094	-.275	....
107	Pay/Emp Fact 1950	.392	....	-.064	-.401	-.440
108	Pay/Emp Fact 1955	.162	.029	.147	-.296	....
109	Pay/Emp Fact 1955/1940	....	....	....	.056	-.127
Mining						
111	Mining/EcAct M 1940	.506	....	-.041	-.237	-.299

TABLE 59

CORRELATION MATRIX: CULTURAL ATTRIBUTES BY DEMOGRAPHIC, TRANSPORTATION, UTILITY AND COMMUNICATION VARIABLES; BY OCCUPATIONAL AND ECONOMIC CHARACTERISTICS; BY LITERACY RATES, YOUTH EMPLOYMENT AND ENROLLMENT; AND POPULATION WALKING BAREFOOT VARIABLES AGAINST THEMSELVES

		Barefoot								Non-Catholic		Water	Sleep on floor	Sleep on bed	Non-wheat Bread		
		M	F	M	U	M/F		M	F	T					T		
		1940	1940	1960	1960	1940	1960	1940-1960		1940	1960	1960	1940	1940*	1940*	1960	1940-1960
	Variable Number	125	128	127	123	131	132	135	138	113	114	43	115	116	117	118	122
Population distribution and change																	
1	Density 1940	.318	....	-.394	....	....	....	....	....	....	....	.013	....	.325*	-.388*	.552	....
2	Density 1960	.245	.363	.328	.563	-.569	-.632	.121	.328	-.424	-.279	.053	.526	.220*	-.321*	.473	-.103
4	Urban 1940	-.634	-.666	-.662	-.191	.231	.485	-.535	-.609	-.013	.149	.566	-.340	-.353*	.665*	-.506	-.558
6	Urban 1960	-.628	....	-.653	....	....	....	....	....	....	....	.638	....	-.449*	.724*	-.606	....
8	Capital/Urban 1940	-.162	-.206	-.149	-.402	.211	.249	-.075	-.175	.340	.068	.013	-.389	.081*	.210*	-.206	-.112
9	Capital/Urban 1960	-.231	....	-.208	....	....	....	....	....	....	....	.098	....	-.023*	.212*	-.201	....
10	Capital Size 1940	-.253	-.183	-.196	.049	-.278	-.054	-.387	-.296	-.309	-.101	.433	.173	-.059*	.151*	.025	-.271
11	Capital Size 1960	-.414	....	-.342	....	....	....	....	....	....	....	.527	....	-.312*	.318*	-.187	....
12	Pop 50,000+ 1960	-.667	-.678	-.633	-.218	.138	.269	-.604	-.615	.042	.090	.560	-.043	-.621*	.413*	-.289	-.363
13	Urban 1960/1930	-.302	-.367	-.313	-.055	.322	.030	-.074	-.072	.502	.509	.102	-.311	-.512*	.393*	-.522	-.016
14	Urban 1960-1950/1960-1940	-.059	-.117	-.044	-.287	.274	.438	-.103	-.173	-.135	-.281	.106	-.017	-.110*	.082*	-.129	.130
15	Born Instate 1940*	-.624*	-.675*	.587*	-.452*	.324*	.423*	-.460*	-.537*	.428*	.356*	.245*	-.228*	-.593**	.477**	-.472*	-.175*
17	Born Instate 1960	.485	....	.504	....	.469	....	....	....	.440	....	-.187	....	.518*	-.503*	.590	....
Transportation																	
18	RR/Pop 1940	-.290	-.224	-.306	-.008	-.246	-.231	-.223	-.151	.175	.282	.055	-.004	-.143*	.101*	-.028	-.219
22	Roads/Pop^A 1940	-.445	....	-.440	....	....	....	....	....	....	....	....	....	....	....	....	....
23	Roads/Pop^B 1940	-.697	....	-.701	-.536	.259	.397	-.332	-.566	.075	.033	.277	-.153	-.544*	.373*	-.354	-.298
24	Roads/Pop 1960	-.182	....	-.232	....	....	....	....	....	....	....	....	....	....	....	....	....
26	Roads/Area^B 1940	-.124	....	-.055	....	....	....	....	....	....	....	....	....	....*	....*	....	....
27	Roads/Area 1960	.042	....	-.097	.427	-.374	-.426	.123	.286	.338	-.296	.082	.367	.179*	-.155*	.284	-.098
28	Roads Paved 1960	-.446	-.428	-.398	.100	-.023	.054	-.410	-.382	-.161	.164	.526	-.107	-.276*	.514*	-.266	-.653
29	Bicycles/Pop 1940	-.293	-.266	....	-.158	....	....	-.237	-.238	....	....	....	....	....	....	....	-.327
30	Bicycles/Pop 1960	-.089	-.059	-.190	-.248	-.126	.045	-.042	-.089	.207	.102	-.097	-.417	.271*	.132*	-.087	-.181
31	Bicycles/Pop 1960-1940	-.081	-.042	....	-.269	....	....	-.036	-.072	....	....	....	....	....	....	....	-.077

		Barefoot								Non-Catholic		Water	Sleep on floor	Sleep on bed	Non-wheat Bread		
		M	F	M	U	M/F		M	F	T					T		
		1940	1940	1960	1960	1940	1960	1940-1960		1940	1960	1960	1940	1940*	1940*	1960	1940-1960
	Variable Number	125	128	127	123	131	132	135	138	113	114	43	115	116	117	118	122
32	Autos/Pop 1940	-.703	-.755	-.733	-.317	.332	.386	-.628	-.635	-.081	.111	.468	-.099	-.654*	.517*	-.468	-.357
33	Autos/Pop 1960	-.597	....	-.626	....	....	....	....	....	....	....	.512	....	-.614*	.641*	-.637	....
34	Autos/Pop 1960/1939	.334	.264	....	.036	....	....	.501	.411	....	....	....	....	....	....	....	.347
35	Autos/Pop 1960-1940	-.143	-.180	....	.078	....	....	-.167	-.194	....	....	....	....	....	....	....	.064
Utility and communication facilities																	
36	Elect/Capita 1940	-.415	-.429	-.310	.005	.103	.103	-.515	-.414	-.494	-.281	.539	.307	-.429*	.294*	-.136	-.362
37	Elect/Capita 1960	-.467	....	-.451	-.226	.400	.330	-.432	-.409	-.159	-.183	.421	.085	-.543*	.364*	-.343	-.211
38	Elect/Capita 1960-1940	-.467	-.470	....	-.168	....	....	-.444	-.375	....	....	....	....	....	....	....	-.121
39	Movies/Pop 1940	-.513	-.600	-.609	-.422	.452	.461	-.317	-.454	.492	.425	.259	-.609	-.399*	.666*	-.708	-.245
40	Movies/Pop 1960	-.628	-.657	-.595	-.181	.212	.418	-.593	-.603	-.067	.111	-.579	-.327	-.608*	.675*	-.605	-.421
41	Movies/Pop 1960-1940	-.258	-.239	....	.206	....	....	-.354	-.239	....	....	....	....	....	....	....	-.256
42	Library Use 1940	-.477	-.455	-.361	.003	-.031	.133	-.558	-.445	-.627	-.345	.655	.123	-.307*	.477*	-.241	-.623
43	Water 1960	-.543	....	-.435	.081	.114	.351	-.559	-.525	-.427	-.087	....	.089	-.473*	.605*	-.403	-.458
44	Radio 1960	-.702	-.756	-.719	-.235	.339	.570	-.603	-.655	-.022	.188	.647	-.169	-.683	.670*	-.623	-.288
Marriage and fertility rate																	
45	Single F 20-24 1960	-.494	-.416	.395	-.116	-.279	.274	-.672	-.577	-.695	-.477	.645	.425	-.364*	.131*	.005	-.232
46	F under 5 Yrs 1940	.450	....	.370	....	....	....	....	....	....	....	-.717	....	.141*	-.434*	.216	....
47	F under 5 Yrs 1960	-.046	-.095	-.045	-.415	.239	.180	.097	-.015	.570	.184	-.509	-.055	-.122*	-.302*	.126	.398
Employment of youth																	
62	Employ 8-11 M 1960	.504	.564	.480	.296	-.339	-.438	.403	.442	-.177	-.135	-.312	.198	.572*	-.429*	.403	.223
63	Employ 8-11 F 1960	.682	.687	.633	.436	-.133	-.416	.605	.594	-.140	-.033	-.316	.127	.626*	-.347*	.326	.216

		Cultural Attributes by	Occupational and Economic Characteristics														
		Barefoot								Non-Catholic		Water	Sleep on floor	Sleep on bed	Non-wheat Bread		
		M	F	M	U	M/F		M	F	T					T		
		1940	1940	1960	1960	1940	1960	1940-1960		1940	1960	1960	1940	1940*	1940*	1960	1940-1960
	Variable Number	125	128	127	123	131	132	135	138	113	114	43	115	116	117	118	122
Labor force participation																	
58	EcAct F 10+ 1940	-.371	.417	-.247	-.102	.225	.298	-.395	-.386	-.202	.067	.610	-.093	.324*	.549*	.494	-.219
59	EcAct F 12+ 1960	-.075	-.118	-.053	.046	.163	-.037	-.053	.034	-.080	.059	.336	.191	-.230*	.252*	-.342	.173
60	EcAct F 1960-1940	.309	.310	.196	.292	-.074	-.479	.306	.434	.003	.117	.000	.419	.011*	-.119*	-.005	.348
61	Devel. Index 1950	-.620	....	-.681	-.242	.367	.438	-.529	-.595	.045	.195	.564	-.213	.530*	-.657*	-.601	-.361
White collar and professional workers																	
64	Collar/EcAct M 1940	-.540	-.641	-.604	-.448	.517	.597	-.381	-.533	.410	.378	.329	-.539	-.482*	.709*	-.741	-.219
65	Collar/EcAct M 1960	-.602	....	-.665	....	....	....	....	....	....	....	.505	....	-.522*	.720*	-.695	....
66	Collar/EcAct M 1960-1940	-.349	-.564	-.570	-.022	.125	.230	-.510	-.512	-.078	.183	.612	-.182	-.475*	.607*	-.488	-.448
67	Collar/EcAct F 1940	-.641	....	-.665	....	....	....	....	....	....	....	.292	....	.660*	.579*	-.605	....
68	Collar/EcAct F 1960	-.773	....	-.736	....	....	....	....	....	....	....	.633	....	.694*	.645*	-.526	....
69	Collar/EcAct F 1960-1940	-.549	-.564	-.116	.389	-.484	-.359	-.146	.012	-.621	-.407	.339	.451	.160*	-.095*	.287	-.224
70	Clerk/EcAct T 1960	-.584	-.683	-.642	-.362	.510	.585	-.449	-.587	.306	.407	.438	-.463	.566*	.720*	-.738	-.239
71	Clerk/EcAct M 1960	-.561	....	-.627	....	....	....	....	....	....	....	.417	....	-.539*	.723*	-.745	....
72	Clerk/EcAct F 1960	-.667	....	-.694	....	....	....	....	....	....	....	.460	....	-.647*	.682*	-.668	....
73	Prof/EcAct T 1960	-.545	....	-.574	....	....	....	....	....	....	....	....	....	....*	....*	....	....
74	Prof/EcAct M 1960	-.433	-.550	-.525	-.243	.348	.379	-.407	-.434	.167	.316	.401	-.323	-.508*	.624*	-.676	-.125
75	Prof/EcAct F 1960	-.506	....	-.483	-.285	.179	.603	-.501	-.553	-.238	-.083	.342	-.279	-.336*	.464*	.353	-.369
Public administration																	
76	P.A./EcAct M 1930	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
77	P.A./EcAct M 1940	-.238	-.400	-.366	-.396	.525	.454	-.093	-.239	.541	.402	.036	-.557	-.315*	.570*	-.692	-.013
Agriculture																	
79	Ag/EcAct M 1940*	-.666*	-.726*	-.705*	-.426*	.362*	.617*	-.584*	-.694*	.089*	.102*	.502*	-.232*	-.469**	.602**	-.531*	-.351*
80	Ag/EcAct M 1960*	-.555*	-.616*	-.606*	-.216*	.333*	.422*	-.449*	-.516*	.100*	.219*	.509*	-.278*	-.459**	.646**	-.595*	-.323*
81	Ag/EcAct M 1960-1940	.081	.090	-.111	-.297	-.023	.223	-.012	-.086	-.056	-.307	-.231	.057	.206*	-.298*	.308	.109

		Cultural Attributes by Occupational and Economic Characteristics															
		Barefoot								Non-Catholic		Water	Sleep on floor	Sleep on bed	Non-wheat Bread		
		M	F	M	U	M/F		M	F	T					T		
		1940	1940	1960	1960	1940	1960	1940-1960		1940	1960	1960	1940	1940*	1940*	1960	1940-1960
	Variable Number	125	128	127	123	131	132	135	138	113	114	43	115	116	117	118	122
82	Ejidos/AgPop 1940	.117	.171	-.095	.009	-.258	-.249	.068	.137	-.075	-.029	-.361	-.078	.283*	-.036*	.111	-.189
83	AgLabor/Ag M 1940	-.124	-.073	-.071	-.180	-.205	-.087	-.136	-.076	-.050	-.260	.021	.399	.074*	.271*	.266	.230
84	AgLabor/Ag M 1960	-.467	-.492	-.359	-.107	.160	.127	-.451	-.373	-.199	-.189	.460	.305	-.515*	.209*	-.154	-.138
85	AgProp/Ag M 1940	.112	-.016	.158	.252	.551	.367	.216	.068	.158	.365	.177	-.135	-.181*	.200*	-.250	.050
86	AgProp/Ag M 1960	.454	.487	.344	.098	-.194	-.143	.445	.369	.212	.190	-.454	-.303	.510*	-.207*	.158	.127
87	AgProp/Ag M 1960-1940	.304	.405	.189	-.063	-.475	-.303	.241	.248	.107	.007	-.531	-.149	.514*	-.312*	.296	.095
88	Equip/Land 1950	-.604	....	-.488	....	....	....	....	....	....	....	.462	....	-.649*	-.007*	.158	....
89	Farm Mechanized 1950	-.790	-.836	-.759	-.491	.315	.560	-.679	-.741	.111	.167	.486	-.154	-.778*	.515*	-.497	-.212
91	Ag Inc under $500 1960*	-.611*	-.727*	.597*	-.430*	.605*	.654*	-.466*	-.568*	.249*	.218*	.408*	-.329*	-.715**	.584**	-.662*	-.109*
94	Returns Glick 1950-1930	-.403	-.486	-.434	-.394	.433	.432	-.213	-.343	.639	.510	.085	-.371	-.589*	.393*	-.555	.146
Manufacturing																	
95	Mfg/EcAct M 1930	-.376	....	-.336	....	....	....	....	....	....	....	....	....	....	....	....	....
96	Mfg/EcAct M 1940	-.431	....	-.432	....	....	....	....	....	....	....	.553	....	-.198*	.396*	-.245	....
97	Mfg/EcAct M 1960	-.324	....	-.364	....	....	....	....	....	....	....	.424	....	-.203*	.324*	-.198	....
98	Mfg/EcAct M 1960-1940	-.116	-.085	....	.073	....	....	-.169	-.088	....	....	....	....	....	....	....	-.080
100	Mfg F/M+F Mfg 1940	.077	....	.110	....	....	....	....	....	....	....	.234	....	.101*	.065*	-.119	....
101	Mfg F/M+F Mfg 1960	.229	....	.341	....	....	....	....	....	....	....	.271	....	.218*	-.044*	.136	....
103	Mfg Inc under $500 1960	.515	.615	.547	.379	-.503	-.462	.379	.452	-.339	-.310	-.303	.236	.714*	-.523*	.639	-.028
105	Pay/Emp Fact 1930	....	....	-.509	-.160	.466	.231	-.348	-.391	.242	.210	.230	-.141	-.600*	.427*	-.409	-.287
106	Pay/Emp Fact 1940	-.498	....	-.426	....	....	....	....	....	....	....	.243	....	-.511*	.017*	.039	....
107	Pay/Emp Fact 1950	-.464	-.492	-.426	-.037	.197	.205	-.464	-.414	-.159	.023	.378	.220	-.668*	.297*	-.257	-.180
108	Pay/Emp Fact 1955	-.483	....	-.482	....	....	....	....	....	....	....	.072	....	-.439*	.004	.035	....
109	Pay/Emp Fact 1955/1940	-.218	-.159	....	-.017	....	....	-.234	-.060	....	....	....	....	....	....	....	-.183
Mining																	
111	Mining/EcAct M 1940	....	....	-.432	-.377	.096	.397	-.585	-.542	-.258	-.267	.335	.317	-.536*	.060*	-.036	-.005

Cultural Attributes by Literacy Rates, Youth Employment and Enrollment

		Barefoot										Non-Catholic		Water	Sleep on Floor	Sleep on Bed	Non-wheat Bread		
		M	F	M	F	Urban	Rural	M/F	M/F	M	F	T					T		
		1940	1940	1960	1960	1960	1960	1940	1960	1940	1960	1940	1960	1960	1940	1940*	1940*	1960	1940-60
	Variable Number	125	128	127	130	123	124	131	132	135	138	113	114	43	115	116	117	119	122
Literacy																			
140	Literacy 10+ T 1940	-.714	-.796	-.727	-.769	-.418	-.800	.474	.693	-.550	-.666	.244	.345	.426	-.446	-.639*	.707*	-.680	-.329
141	Literacy 10+ T 1960	-.711	-.778	-.707	-.758	-.397	-.769	.412	.739	-.566	-.686	.168	.292	.422	-.368	-.642*	.625*	-.568	-.305
145	Literacy 40+M 1940	-.626	-.700	-.640	-.659	-.307	-.714	.424	.564	-.443	-.528	.289	.379	.373	-.392	-.566*	.669*	-.639	-.319
146	Literacy 40+F 1940	-.796	-.364	-.762	-.831	-.480	-.857	.425	.723	-.657	-.752	.130	.227	.494	-.383	-.665*	.691*	-.644	-.360
147	Literacy 40+M 1960	-.648	-.725	-.677	-.699	-.312	-.735	.445	.662	-.483	-.599	.199	.319	.416	-.374	-.559*	.646*	-.588	-.338
148	Literacy 40+F 1960	-.818	-.871	-.792	-.863	-.504	-.870	.366	.763	-.693	-.792	.061	.162	.482	-.350	-.669*	.623*	-.560	-.346
153	Literacy 6+0 Sch M 1940	.435	.438	.531	.512	.389	.548	.071	-.091	.394	.381	.002	.225	-.319	-.033	.166*	-.182*	.147	.224
Literacy of youth																			
155	Literacy 10-14 M 1930	-.502	-.582	-.559	-.579	-.241	-.623	.429	.532	-.347	.446	.300	.431	.368	-.481	-.441*	.701*	-.663	-.347
156	Literacy 10-14 F 1930*	.709*	.795*	-.728*	.713*	.340*	.784*	-.488*	-.569*	.541*	.614*	-.198*	-.284*	-.476*	.421*	.656	-.720	.678*	.429*
157	Literacy 10-14 M 1940	-.577	-.635	-.620	-.633	-.279	-.680	.560	.635	-.398	-.540	.320	.467	.394	-.517	-.598*	.751*	-.737	-.325
158	Literacy 10-14 F 1940	-.671	-.761	-.697	-.737	-.403	-.764	.496	.681	-.520	-.648	.272	.390	.427	-.487	-.665*	.744*	-.734	-.302
159	Literacy 10-14 M 1960	-.621	-.698	-.612	-.658	-.277	-.688	.435	.675	-.462	-.573	.192	.371	.429	-.389	-.573*	.632*	-.615	-.332
160	Literacy 10-14 F 1960	-.671	-.733	-.667	-.720	-.363	-.735	.381	.674	-.531	-.632	.187	.323	.410	-.361	-.633*	.640*	-.589	-.294
Changes in youth literacy																			
161	Literacy 10-14 M 1940-30	-.482	-.589	-.450	....	-.229	....	.535	....	-.353	-.531	.212	....	.297	....	-.678*	.535*	....	-.098
162	Literacy 10-14 F 1940-30	-.305	-.419	-.317	....	-.276	....	....	....	-.177	-.398	....	....	....	....	....	.508*	....	.037
163	Literacy 10-14 M 1960-40*	-.276*	-.404*	.401*	....	-.184*	....	.596*	....	-.129*	-.285*	.444*	....	.190*	....	-.425*	.614**	....	-.177*
164	Literacy 10-14 F 1960-40*	-.482*	-.596*	.550*	....	-.363*	....	....	....	-.357*	-.503*	....	....	....	....	....	.728**	....	-.224*
Enrollment																			
265	Enrol 6-14 T 1937	-.343	-.455	-.333	-.387	-.266	-.394	.506	.460	-.235	-.321	.431	.531	.222	-.399	-.604*	.626*	-.727	.010
266	Enrol 6-14 T 1960*	.106*	.194*	-.156*	.257*	.088*	.258*	-.392*	-.355*	-.012*	.106*	-.366*	-.482*	-.133*	.546*	.241**	-.629**	.673*	.163*

		Cultural Attributes by Literacy Rates, Youth Employment and Enrollment																	
		Barefoot										Non-Catholic		Water	Sleep on Floor	Sleep on Bed	Non-wheat Bread		
		M	F	M	F	Urban	Rural	M/F	M/F	M	F	T					T		
		1940	1940	1960	1960	1960	1960	1940	1960	1940	1960	1940	1960	1960	1940	1940*	1940*	1960	1940-60
	Variable Number	125	128	127	130	123	124	131	. 132	135	138	113	114	43	115	116	117	119	122
Urban literacy 1960																			
	Males																		
168	40-49	-.593	-.665	-.656	-.682	-.674	-.632	.418	.644	-.495	-.653	.383	.233	.119	-.322	-.515*	.361*	-.407	-.040
169	30-39	-.593	-.659	-.641	-.682	-.666	-.629	.393	.647	-.504	-.645	.332	.205	.148	-.325	-.536*	.393*	-.428	-.070
170	25-29	-.312	-.426	-.326	-.400	-.322	-.405	.502	.399	-.251	-.386	.312	.278	.306	-.352	-.402*	.535*	-.535	.000
173	10-14	-.668	-.729	-.632	-.764	-.656	-.712	.372	.689	-.585	-.712	.265	.149	.290	-.336	-.579*	.489*	-.498	-.146
	Females																		
176	40-49*	.763*	.828*	.759*	.834*	.689*	.791*	-.413*	-.767*	.673*	.790*	-.167*	-.113*	-.321*	.294*	.646	-.468	.471*	.160*
177	30-39	-.718	-.778	-.730	-.806	-.700	-.757	.395	.737	-.621	-.753	.287	.212	.234	-.367	-.632*	.470*	-.489	-.127
178	25-29*	.571*	.675*	-.571*	.654*	.517*	.633*	-.524*	-.644*	.484*	.620*	-.256*	-.234*	-.347*	.348*	.598	-.557	.592*	.060*
181	10-14	-.700	-.750	-.700	-.779	-.698	-.730	.332	.631	-.620	-.728	.235	.160	.280	-.345	-.613*	.496*	-.502	-.160
Rural literacy 1960																			
	Males																		
184	40-49	-.496	-.567	-.492	-.505	-.143	-.531	.403	.616	-.344	-.457	.091	.250	.303	-.213	-.468*	.443*	-.346	-.301
185	30-39	-.484	-.559	-.466	-.493	-.173	-.506	.418	.630	-.335	-.459	.151	.293	.279	-.229	-.522*	.446*	-.370	-.245
186	25-29	-.498	-.565	-.496	-.533	-.251	-.539	.393	.664	-.328	-.456	.197	.293	.222	-.286	-.475*	.417*	-.364	-.210
189	10-14	-.464	-.549	-.465	-.487	-.154	-.516	.448	.577	-.300	-.410	.217	.409	.308	-.305	-.524*	.573*	-.524	-.247
	Females																		
192	40-49	-.792	-.841	-.730	-.796	-.439	-.794	.353	.787	-.676	-.764	-.034	.086	.452	-.209	-.693*	.487*	-.406	-.295
193	30-39	-.707	-.760	-.650	-.703	-.362	-.695	.357	.774	-.600	-.709	.012	.201	.423	-.200	-.708*	.491*	-.421	-.230
194	25-29*	.701*	.761*	-.637*	.693*	.334*	.679*	-.392*	-.797*	.590*	.687*	.033*	-.100*	-.415*	.167*	.683**	-.441**	.362*	.251*
197	10-14*	.561*	.645*	-.549*	.558*	.203*	.587*	-.457*	-.607*	.414*	.515*	-.112*	-.297*	-.368*	.205*	.612**	-.520**	.469*	.236*
Age differences in literacy 1960																			
	Urban males																		
198	(15-19) - (40-49)	.179	.237	.335	.272	.430	.214	-.307	-.339	.128	.314	-.475	-.279	.294	.121	.205*	.125*	.006	-.265
199	(40-49) - (60+)	.001	.007	.043	.037	.042	.057	-.018	.065	.001	-.075	-.059	-.137	-.380	.213	.020*	-.501*	.517	.140
	Urban females																		
200	(15-19) - (40-49)	.718	.763	.715	.791	.631	.744	-.325	-.736	.686	.810	-.009	.014	-.328	.202	.529*	-.356*	.314	.219
201	(40-49) - (60+)	-.432	-.461	-.432	-.460	-.519	-.408	.207	.469	-.368	-.502	.411	.123	-.093	-.194	-.395*	.010*	-.036	.067

		Cultural Attributes by Literacy Rates, Youth Employment and Enrollment																	
		Barefoot										Non-Catholic		Water	Sleep on Floor	Sleep on Bed	Non-wheat Bread		
		M	F	M	F	Urban	Rural	M/F	M/F	M	F	T					T		
		1940	1940	1960	1960	1960	1960	1940	1960	1940	1960	1940	1960	1960	1940	1940*	1940*	1960	1940-60
	Variable Number	125	128	127	130	123	124	131	132	135	138	113	114	43	115	116	117	119	122
	Rural males																		
202	(15-19) - (40-49)	-.033	-.112	.017	-.027	.047	-.053	.345	.195	.101	.038	.389	.645	.048	-.429	-.254*	.509*	-.578	-.003
203	(40-49) - (60+)	-.437	-.519	-.465	-.417	-.204	-.426	.436	.588	-.327	-.527	.172	.169	.223	-.248	-.335*	.291*	-.163	-.342
	Rural females																		
204	(15-19) - (40-49)	.587	.587	.532	.601	.519	.568	-.100	-.481	.600	.620	.277	.385	-.295	.025	.345*	-.103*	.043	.192
205	(40-49) - (60+)	-.659	-.705	-.736	-.713	-.438	-.703	.318	.692	-.535	-.663	.057	.101	.308	-.248	-.434*	.363*	-.306	-.236
Male-female differences in literacy by age 1960																			
	Urban males minus urban females																		
208	40-49	.823	.817	.733	.874	.621	.841	-.111	-.679	.798	.823	.111	.096	-.446	.243	.587*	-.461*	.384	.318
210	25-29	.693	.708	.618	.742	.564	.689	-.176	-.634	.670	.730	-.021	-.126	-.325	.254	.610*	-.448*	.412	.172
211	20-24	.550	....	.476	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
213	10-14	.634	.630	.583	.630	.521	.605	-.094	-.468	.590	.593	-.147	-.158	-.169	.288	.579*	-.390*	.387	.171
	Rural males minus rural females																		
218	40-49	.843	.847	.735	.840	.629	.805	-.155	-.687	.816	.839	.174	.147	-.457	.123	.696*	-.351*	.320	.173
220	25-29	.811	.801	.682	.736	.395	.727	-.087	-.657	.812	.814	.281	.072	-.603	.031	.771*	-.406*	.305	.274
221	20-24	.726	.729	.616	....	....	....	-.125	....	.755	....	.196	....	-.492	....	.723*	-.254*	....	.083
223	10-14	.726	.674	.630	.737	.510	.698	.110	-.467	.742	.720	.154	.162	-.325	.013	.605*	-.184*	.145	.121
Child employment																			
62	Employ 8-11 M 1960	.504	.564	.480	.....	.296	....	-.339	-.438	.403	.442	-.177	-.135	-.312	.198	.572*	-.429*	.403	.223
63	Employ 8-11 F 1960	.632	.687	.638	.....	.436	....	-.138	-.416	.605	.594	-.140	-.033	-.316	.127	.626*	-.347*	.326	.216

		Males Barefoot					Females Barefoot					Barefoot M+F		Barefoot M/F	
												Urban	Rural		
		1940	1960	1940-1950	1950-1960	1940-1960	1940	1960	1940-1950	1950-1960	1940-1960	1960		1940	1960
	Variable Number	125	127	133	134	135	128	130	136	137	138	123	124	131	132
125	Barefoot M 1940	1.000	.917	.870	.887	.937	.973	.917	.837	.855	.906	.585	.941	-.050	-.567
127	Barefoot M 1960	.917	1.000	.747	.796	.820	.892	.934	.740	.763	.804	.639	.953	-.045	-.497
133	Barefoot M 1940-1950	.870	.747	1.000	.751	.951	.812	.764	.877	.705	.869	.499	.760	.115	-.440
134	Barefoot M 1950-1960	.887	.796	.751	1.000	.919	.826	.823	.691	.962	.857	.591	.827	.120	-.434
135	Barefoot M 1940-1960	.937	.820	.951	.919	1.000	.874	.846	.849	.874	.922	.576	.843	.125	-.467
128	Barefoot F 1940	.973	.892	.812	.826	.874	1.000	.901	.853	.834	.908	.558	.930	-.277	-.676
130	Barefoot F 1960	.917	.934	.764	.828	.846	.901	1.000	.803	.806	.864	.766	.979	-.031	-.616
136	Barefoot F 1940-1950	.837	.740	.877	.691	.849	.853	.803	1.000	.724	.956	.576	.774	-.210	-.726
137	Barefoot F 1950-1960	.855	.763	.705	.962	.874	.834	.806	.724	1.000	.894	.543	.799	-.048	-.571
138	Barefoot F 1940-1960	.906	.804	.869	.857	.922	.908	.864	.956	.894	1.000	.604	.842	-.157	-.714
123	Barefoot Urban 1960	.585	.639	.499	.591	.576	.558	.766	.576	.543	.604	1.000	.649	.014	-.410
124	Barefoot Rural 1960	.941	.953	.760	.827	.843	.930	.979	.774	.799	.842	.649	1.000	-.104	-.563
131	Barefoot M/F 1940	-.050	-.045	.115	.120	.125	-.277	-.031	-.210	-.048	-.157	-.014	-.104	1.000	.588
132	Barefoot M/F 1960	-.567	-.497	-.440	-.434	-.467	-.676	-.616	-.726	-.571	-.714	-.410	-.563	.588	1.000

TABLE 60

CORRELATION MATRIX: OCCUPATIONAL AND ECONOMIC CHARACTERISTICS AGAINST THEMSELVES, EACH OTHER, AGAINST ADULT EDUCATIONAL ATTAINMENTS AND AGAINST SIX OTHER SELECTED VARIABLES

		Enrollment		Roads/Area		Barefoot		Economically Active											Devel. Index
		6-14-T				Males		Males				Females				F 10+	F 12+	F	
		1937	1960*	1940³	1960	1940	1960	1930	1940	1950	1960	1930	1940	1950	1960	1940	1960	1960-1940	1950
	Variable Number	265	266	26	27	125	127	50	51	52	53	54	55	56	57	58	59	60	61
265	Enrol 6-14 T 1937	1.000	-.738*	-.252	-.015	-.349	-.333	.184	.170	-.047	-.082	.313	.248	.262	.284	.350	.395	.125	.484
266	Enrol 6-14 T 1960*	-.738*	1.000**	.031*	-.144*	.106*	.156*	-.013*	-.167*	-.069*	.090*	-.087*	-.158*	-.074*	-.123*	-.264*	-.213*	-.011*	-.427*
26	Roads/Area³ 1940	-.252	.031*	1.000	.674	.226	.312	-.103	-.203	-.086	-.348	.057	.224	.244	.271	.258	.210	.101	-.250
27	Roads/Area 1960	-.015	-.144*	.674	1.000	-.065	-.028	.068	-.144	-.083	-.156	-.002	.074	.221	.237	.181	.209	.227	.023
125	Barefoot M 1940	-.349	.106*	.226	-.065	1.000	.917	-.300	.011	.187	.263	-.500	-.407	-.241	-.064	-.371	-.075	.309	-.620
127	Barefoot M 1960	-.333	.156*	.312	-.028	.917	1.000	-.288	-.112	.039	.138	-.378	-.271	-.108	-.030	-.247	-.053	.196	-.681
	Labor force participation																		
50	EcAct M 1930	.184	-.013*	-.103	.068	-.300	-.288	1.000	.763	.555	.176	.256	.155	.125	.148	.242	.233	-.016	.110
51	EcAct M 1940	.170	-.167*	-.203	-.144	.011	-.112	.763	1.000	.691	.320	.110	.026	-.119	-.030	.099	.088	-.084	.081
52	EcAct M 1950	-.047	-.069*	-.086	-.083	.187	.039	.555	.691	1.000	.451	-.024	-.211	-.091	-.069	-.146	-.042	.096	-.010
53	EcAct M 1960	-.082	.090*	-.348	-.156	.263	.138	.176	.320	.451	1.000	-.050	-.227	-.058	-.072	-.239	-.120	.201	-.012
54	EcAct F 1930	.313	-.087*	.057	-.002	-.500	-.378	.256	.110	-.024	-.050	1.000	.875	.769	.520	.852	.487	-.192	.463
55	EcAct F 1940	.248	-.158*	.224	.074	-.407	-.271	.155	.026	-.211	-.227	.875	1.000	.784	.619	.975	.582	-.168	.493
56	EcAct F 1950	.262	-.074*	.244	.221	-.241	-.108	.125	-.119	-.091	-.058	.769	.784	1.000	.860	.798	.794	.312	.394
57	EcAct F 1960	.284	-.123*	.271	.237	-.064	-.030	.148	-.030	-.069	-.072	.520	.619	.860	1.000	.664	.972	.645	.348
58	EcAct F 10+ 1940	.350	-.264*	.258	.181	-.371	-.247	.242	.099	-.146	-.239	.852	.975	.798	.664	1.000	.651	-.089	.495
59	EcAct F 12+ 1960	.395	-.213*	.210	.209	-.075	-.053	.233	.088	-.042	-.120	.487	.582	.794	.972	.651	1.000	.632	.332
60	EcAct F 1960-1940	.125	-.011*	.101	.227	.309	.196	-.016	-.084	.096	.201	-.192	-.168	.312	.645	-.089	.632	1.000	.045
61	Devel. Index	.484	-.427*	-.250	.023	-.620	-.681	.110	.081	-.010	-.012	.463	.493	.394	.348	.495	.332	-.045	1.000
	White collar and professional workers																		
64	Collar/EcAct M 1940	.713	-.634*	-.272	.016	-.540	-.604	.236	.307	-.039	-.057	.404	.457	.189	.166	.500	.252	-.182	.802
65	Collar/EcAct M 1960	.591	-.568*	-.146	.073	-.602	-.665	.127	.163	-.059	-.177	.459	.546	.330	.267	.573	.288	-.110	.895
66	Collar/EcAct M 1960-1940	.340	-.381*	.036	.132	-.549	-.570	-.053	-.090	-.084	-.252	.425	.510	.404	.275	.507	.213	-.055	.773
67	Collar/EcAct F 1940	.748	-.634*	-.513	-.138	-.641	-.645	.117	.111	-.097	-.128	.223	.164	.022	.001	.198	.087	-.111	.734
68	Collar/EcAct F 1960	.554	-.478*	-.141	.109	-.773	-.736	.017	-.138	-.174	-.233	.503	.434	.353	.185	.491	.166	-.166	.827
69	Collar/EcAct F 1960-1940	-.477	.393*	.634	.352	.032	.116	-.159	-.345	-.065	-.155	.279	.355	.412	.234	.310	.074	-.033	-.110

		Enrollment		Roads/Area		Barefoot		Economically Active											Devel. Index
		6-14 T				Males		Males				Females				F 10+	F 12+	F	
		1937	1960*	1940^{B}	1960	1940	1960	1930	1940	1950	1960	1930	1940	1950	1960	1940	1960	1960-1940	1950
	Variable Number	265	266	26	27	125	127	50	51	52	53	54	55	56	57	58	59	60	61
70	Clerk/EcAct T 1960	.711	-.607*	-.350	-.063	-.584	-.642	.123	.162	-.090	-.119	.432	.470	.289	.248	.499	.300	-.083	.879
71	Clerk/EcAct M 1960	.708	-.608*	-.345	-.060	-.561	-.627	.12[illegible]	.139	-.078	-.103	.420	.466	.270	.235	.496	.291	-.093	.870
72	Clerk/EcAct F 1960	.682	-.577*	-.416	-.112	-.667	-.695	.068	.051	-.124	-.150	.402	.391	.234	.133	.406	.174	-.150	.863
73	Prof/EcAct T 1960	.654	-.730*	-.046	.129	-.545	-.570	.087	.117	-.083	-.295	.478	.534	.374	.346	.585	.381	-.060	.801
74	Prof/EcAct M 1960	.637	-.607*	-.101	.106	-.483	-.525	.191	.187	-.029	-.256	.481	.494	.465	.442	.570	.492	.095	.760
75	Prof/EcAct F 1960	.402	-.574*	.004	.086	-.506	-.483	-.139	-.085	-.234	-.304	.312	.314	.020	-.080	.308	-.068	-.388	.513
Public administration																			
76	P.A./EcAct M 1930	.619	-.532*	-.281	-.026	-.277	-.362	.411	.469	.064	-.046	.137	.179	-.045	.101	.260	.266	-.072	.405
77	P.A./EcAct M 1940	.694	-.635*	-.192	.018	-.238	.366	.329	.423	.058	-.057	.258	.338	.095	.193	.414	.323	-.080	.554
Agriculture																			
78	Ag/EcAct M 1930*	.483*	-.468**	-.280*	-.069*	-.522*	-.599*	.124*	.294*	-.018*	.056*	.376*	.412*	.066*	.053*	.399*	.110*	-.260*	.783*
79	Ag/EcAct M 1940*	.490*	-.484**	-.174*	.058*	-.666*	-.705*	.052*	.089*	-.172*	-.112*	.457*	.535*	.238*	.170*	.519*	.194*	-.224*	.885*
80	Ag/EcAct M 1960*	.533*	-.569**	-.009*	.146*	-.555*	-.606*	.057*	.105*	-.117*	-.238*	.416*	.558*	.328*	.329*	.582*	.343*	-.050*	.902*
81	Ag/EcAct M 1960-1940	-.234	.274*	-.198	-.145	.081	.111	-.099	-.113	-.128	.229	-.079	-.202	-.317	-.407	-.273	-.393	-.339	-.377
82	Ejidos/AgPop 1940	-.015	-.301*	.285	.289	.117	.095	-.025	.142	.287	-.103	-.216	-.215	-.344	-.294	-.176	-.285	-.138	-.086
83	AgLabor/Ag M 1940	-.136	.169*	.202	.131	-.124	-.070	.212	-.099	-.074	-.383	.074	.148	.260	.332	.174	.365	.196	-.125
84	AgLabor/Ag M 1960	.274	-.170*	.308	.313	-.467	-.359	.170	-.220	-.221	-.532	.435	.537	.543	.522	.582	.524	.169	.431
85	AgProp/Ag M 1940	.234	-.120*	-.387	-.405	.112	.158	-.314	-.204	-.273	.203	.067	.073	.160	.145	.021	.164	.110	.131
86	AgProp/Ag M 1960	-.272	.138*	-.298	-.281	.454	.344	-.170	.223	.229	.539	-.452	-.541	-.545	-.531	-.584	-.534	-.172	-.413
87	AgProp/Ag M 1960-1940	-.354	.191*	-.047	-.037	.304	.189	-.002	.295	.328	.294	-.434	-.507	-.573	-.544	-.527	-.552	-.224	-.399
88	Equip/Land 1950	.132	.057*	.204	.253	-.604	-.488	-.052	-.387	-.271	-.356	.284	.280	.328	.301	.249	.254	.164	.409
89	Farm Mechanized 1950	.652	-.432*	-.232	.054	-.790	-.759	.318	.065	-.106	-.271	.428	.396	.246	.241	.430	.289	-.061	.692
90	Farm Non-mech 1950	.003	-.080*	-.049	-.058	.510	.411	.004	.292	.218	.400	.058	.054	.061	-.027	.106	-.005	-.086	-.175
91	AgInc under $500 1960*	.717*	-.493**	-.431*	-.153*	-.611*	.597*	.237*	.082*	-.165*	-.087*	.422*	.393*	.235*	.224*	.424*	.310*	-.053*	.683*
92	Returns Glick 1930	.664	-.579*	-.369	-.298	-.109	-.168	.385	.523	.287	.061	.263	.142	.021	-.029	.236	.106	-.156	.312
93	Returns Glick 1950	.772	-.529*	-.474	-.262	-.381	-.429	.466	.423	.184	.060	.194	.094	.085	.082	.173	.219	-.014	.401
94	Returns Glick 1950-1930	.737	-.466*	-.455	-.235	-.403	-.434	.456	.357	.133	.036	.157	.080	.104	.125	.153	.256	.046	.373

		Enrollment		Roads/Area		Barefoot		Economically Active												Devel. Index
		6-14 T				Males		Males				Females				F 10+	F 12+	F		
		1937	1960*	1940B	1960	1940	1960	1930	1940	1950	1960	1930	1940	1950	1960	1940	1960	1960-1940	1950
	Variable Number	265	266	26	27	125	127	50	51	52	53	54	55	56	57	58	59	60	61
	Manufacturing and mining																		
95	Mfg/EcAct M 1930	.106	-.187*	.138	.008	-.376	-.336	-.076	.028	-.058	.086	.506	.518	.276	.063	.439	-.026	-.366	.594
96	Mfg/EcAct M 1940	.034	-.211*	.192	.135	-.431	-.432	-.007	.054	-.084	-.086	.485	.612	.364	.255	.562	.190	-.201	.708
97	Mfg/EcAct M 1960	.180	-.275*	.237	.226	-.324	-.364	-.058	.004	.017	-.174	.234	.422	.292	.297	.418	.237	.064	.682
98	Mfg/EcAct M 1960-1940	.227	-.133*	.110	.151	-.116	-.169	-.125	-.095	.057	-.107	-.104	.023	.101	.190	.046	.159	.297	.349
99	Mfg F/M+F Mfg 1930	-.193	.285*	-.108	-.267	.331	.339	-.036	-.020	.019	.113	.233	.125	.281	.259	.108	.256	.146	-.460
100	Mfg F/M+F Mfg 1940	-.125	.381*	-.151	-.354	.077	.110	-.022	-.078	-.189	.209	.357	.346	.307	.211	.273	.156	-.075	-.212
101	Mfg F/M+F Mfg 1960	-.329	.506*	.109	.020	.229	.341	-.070	-.223	-.187	.297	.243	.196	.375	.252	.141	.151	.103	-.409
102	Mfg Inc $1500+ 1960	.688	-.428*	-.402	-.143	-.583	-.559	.210	-.018	-.083	-.264	-.335	.294	.313	.280	.346	.343	.100	.652
103	Mfg Inc under $500 1960	-.776	.579*	.275	.011	.515	.547	-.222	-.100	.117	.228	-.326	-.356	-.298	-.354	-.428	-.448	-.148	-.726
104	Mfg Olick 1950	.461	-.449*	-.318	-.039	-.395	-.531	.210	.266	.116	.053	.151	.191	.150	.285	.233	.339	.230	.786
105	Pay/Emp Fact 1930	.502	-.321*	-.159	-.017	-.476	-.509	.285	.207	.210	-.010	.284	.238	.245	.224	.266	.262	.141	.708
106	Pay/Emp Fact 1940	.192	.094*	-.249	-.076	-.498	-.426	-.017	-.268	-.263	-.172	.103	.181	.205	.198	.131	.198	.139	.406
107	Pay/Emp Fact 1950	.386	-.153*	-.060	.025	-.464	-.426	-.076	-.312	-.089	-.252	.307	.262	.392	.342	.266	.320	.245	.564
108	Pay/Emp Fact 1955	.132	.011*	-.282	.027	-.483	-.482	-.091	-.253	-.032	-.151	-.029	-.168	-.030	-.113	-.176	-.078	.035	.305
109	Pay/Emp Fact 1955/40	-.082	.107*	.014	.206	-.213	-.275	.241	.145	.393	.214	.251	.024	.151	.173	.038	.133	.169	.241
	Mining																		
110	Mining/EcAct M 1930	.210	.004*	-.087	.054	-.551	-.449	-.174	-.434	-.351	-.266	.426	.342	.287	.184	.291	.147	-.085	.331
111	Mining/EcAct M 1940	.260	.016*	-.291	-.263	-.449	-.432	-.239	-.480	-.410	-.270	.169	.169	.143	.107	.098	.097	.020	.320
112	Mining/EcAct M 1960	.195	-.130*	-.295	-.246	-.223	-.185	-.399	-.443	-.369	-.330	-.093	-.033	-.098	-.121	-.071	-.095	-.104	.230
	Employment of youth																		
62	Employ 8-11 M 1960	-.651	.709*	.037	-.269	.504	.480	....	....	....	....	....	....	....	....	-.251	-.169	.232	-.604
63	Employ 8-11 F 1960	-.476	.457*	.157	-.243	.682	.538	....	....	....	....	....	....	....	....	-.223	-.022	.036	-.600

		Enrollment		Roads/Area		Barefoot		Economically Active											Devel. Index
		6-14-T				Males		Males				Females				F 10+	F 12+	F	
		1937	1960*	1940^B	1960	1940	1960	1930	1940	1950	1960	1930	1940	1950	1960	1940	1960	1960-1940	1950
	Variable Number	265	266	26	27	125	127	50	51	52	53	54	[illegible]	56	57	58	59	60	61
	Adult levels of schooling																		
	Low levels:																		
254	6 + 0 Sch M 1940*	.723*	-.677	-.225*	-.137*	-.212*	-.236*	-.006*	.224*	-.143*	-.011*	.303*	.329*	.157*	.142*	.362*	.227*	-.110*	.520*
255	6 + 0 Sch F 1940*	.790*	-.708	-.278*	-.131*	-.369*	-.392*	.089	.260	-.144*	-.076*	.356*	.370*	.162*	.146*	.407*	.246*	-.146*	.601*
261	6 + 6 + Yrs Sch M 1940	.635	-.549*	-.279	.066	-.612	-.668	.206	.255	.015	.033	.451	.464	.314	.277	.488	.319	-.038	.917
262	6 + 6 + Yrs Sch F 1940	.603	-.500*	-.255	.071	-.727	-.745	.164	.145	-.080	-.082	.509	.526	.341	.269	.534	.294	-.101	.933
226	Adult 25 + 0 M 1950	-.715	.604*	.290	-.042	.632	.656	-.108	-.105	.115	.060	-.316	-.278	-.184	-.133	-.307	-.201	.063	-.793
227	Adult 25 + 0 F 1950	-.634	.462*	.362	.079	.671	.630	-.166	-.013	.178	.092	-.364	-.369	-.248	-.140	-.378	-.186	.142	-.810
228	Adult 30 + 0 M 1960	-.714	.638*	.304	-.001	.601	.645	-.042	-.093	.136	.056	-.289	-.263	-.153	-.131	-.287	-.197	.044	-.802
229	Adult 30 + 0 F 1960	-.687	.576*	.351	.032	.780	.769	-.091	-.058	.224	.177	-.399	-.360	-.153	-.068	-.364	-.128	.233	-.775
258	Adult 0 Sch M 1950-1960	-.469	.376*	.134	-.210	.520	.461	-.197	-.049	.045	.118	-.214	-.160	-.140	.014	-.198	-.039	.208	-.432
	High levels:																		
236	Adult 25+7+M 1950	.659	-.535*	-.314	-.063	-.588	-.648	.255	.260	.016	-.015	.444	.444	.315	.292	.492	.336	-.007	.914
237	Adult 25+7+F 1950	.589	-.447*	-.253	.120	-.717	-.743	.137	.083	-.119	-.134	.464	.454	.310	.259	.477	.274	-.043	.921
238	Adult 30+7+M 1960	.680	-.570*	-.253	.043	-.575	-.631	.135	.148	-.092	-.054	.519	.540	.394	.365	.576	.391	.011	.922
239	Adult 30+7+F 1960	.610	-.491*	-.191	.130	-.688	-.702	.052	-.007	-.184	-.151	.494	.524	.385	.326	.543	.326	-.012	.931
240	Adult 25+10+M 1950	.619	-.573*	-.251	.084	-.570	-.623	.201	.274	.047	-.004	.519	.526	.387	.326	.576	.356	-.045	.902
241	Adult 25+10+F 1950	.515	-.381*	-.172	.182	-.632	-.649	.125	.095	-.044	-.058	.504	.476	.363	.265	.504	.253	-.059	.884
242	Adult 30+10+M 1960	.656	-.565*	-.218	.066	-.572	-.624	.171	.170	-.072	-.051	.569	.588	.452	.404	.628	.425	.004	.909
243	Adult 30+10+F 1960	.566	-.477*	-.114	.190	-.670	-.671	.035	-.042	-.195	-.149	.522	.564	.438	.345	.579	.328	-.036	.912
248	Adult 15+Sec M 1940	.193	-.260*	.036	.174	.438	-.444	.107	.225	-.043	-.043	.381	.501	.207	.071	.498	.060	-.333	.566
249	Adult 15+Sec F 1940	.076	-.136*	.167	.211	-.472	.395	-.102	-.150	-.098	-.166	.421	.484	.336	.100	.434	.001	-.301	.516
250	Adult 15+Un M 1940	.400	-.336*	-.338	.001	-.584	-.657	.130	.189	-.027	.048	.343	.400	.245	.166	.389	.164	-.109	.842
251	Adult 15+Un F 1940	.530	-.352*	-.264	-.001	-.734	-.717	.141	.077	-.146	-.128	.470	.541	.360	.273	.524	.280	-.110	.855

		White Collar						Clerical			Professional			Public Admin.	
		Males			Females			T	Males	Females	T	Males	Females	Males	
		1940	1960	1960-40	1940	1960	1960-40	1960			1960			1930	1940
	Variable Number	64	65	66	67	68	69	70	71	72	73	74	75	76	77
White collar and professional workers															
64	Collar/EcAct M 1940	1.000	.884	.552	.800	.677	-.403	.927	.940	.850	.780	.739	.531	.779	.901
65	Collar/EcAct M 1960	.884	1.000	.871	.746	.851	-.099	.949	.949	.906	.865	.826	.536	.485	.669
66	Collar/EcAct M 1960-1940	.552	.871	1.000	.525	.859	.258	.741	.727	.758	.734	.687	.431	.037	.254
67	Collar/EcAct F 1940	.800	.746	.525	1.000	.771	-.598	.847	.835	.892	.747	.691	.615	.595	.651
68	Collar/EcAct F 1960	.677	.851	.859	.771	1.000	.049	.820	.796	.890	.825	.749	.675	.251	.372
69	Collar/EcAct F 1960-1940	-.403	-.099	.258	-.598	.049	1.000	-.296	-.308	-.279	-.134		-.117	-.617	-.553
70	Clerk/EcAct T 1960	.927	.949	.741	.847	.820	-.296	1.000	.998	.968	.837	.829	.507	.612	.739
71	Clerk/EcAct M 1960	.940	.949	.727	.835	.796	-.308	.998	1.000	.954	.827	.817	.497	.632	.763
72	Clerk/EcAct F 1960	.850	.906	.758	.892	.890	-.279	.968	.954	1.000	.816	.802	.560	.502	.609
73	Prof/EcAct T 1960	.780	.865	.734	.747	.825	-.134	.837	.827	.816	1.000	.906	.780	.478	.611
74	Prof/EcAct M 1960	.739	.826	.687	.691	.749	-.140	.829	.817	.802	.906	1.000	.550	.487	.600
75	Prof/EcAct F 1960	.531	.536	.431	.615	.675	-.117	.507	.497	.560	.780	.550	1.000	.310	.358
Public administration															
76	P.A./EcAct M 1930	.779	.485	.037	.595	.251	-.617	.612	.632	.502	.478	.487	.310	1.000	.905
77	P.A./EcAct M 1940	.901	.669	.254	.651	.372	-.553	.739	.763	.609	.611	.600	.358	.905	1.000
Agriculture															
78	Ag/EcAct M 1930*	.890*	.766*	.453*	.695*	.590*	-.347*	.794*	.810*	.728*	.679*	.547*	.584*	.678*	.742*
79	Ag/EcAct M 1940*	.888*	.868*	.643*	.735*	.763*	-.192*	.845*	.849*	.811*	.787*	.662*	.659*	.557*	.676*
80	Ag/EcAct M 1960*	.848*	.953*	.822*	.691*	.807*	-.068*	.882*	.884*	.822*	.889*	.790*	.617*	.488*	.649*
81	Ag/EcAct M 1960-1940	-.163	-.478	-.653	-.176	-.386	-.210	-.360	-.350	-.327	-.469	-.510	-.066	.058	-.058
82	Ejidos/AgPop 1940	-.032	-.012	.035	-.010	.035	.059	-.109	-.097	-.107	.119	-.086	.315	-.075	-.018
83	AgLabor/Ag M 1940	-.184	-.130	-.062	-.236	-.092	.257	-.155	-.176	-.144	-.148	-.102	-.326	-.037	-.117
84	AgLabor/Ag M 1960	.313	.440	.473	.297	.510	.177	.349	.326	.345	.426	.443	.195	.180	.278
85	AgProp/Ag M 1940	.175	.068	-.038	.265	-.022	-.444	.230	.229	.220	.028	.084	-.103	.157	.221
86	AgProp/Ag M 1960	-.302	-.420	-.447	-.288	-.490	-.166	-.336	-.315	-.328	-.409	-.431	-.183	-.187	-.281
87	AgProp/Ag M 1960-1940	-.326	-.369	-.336	-.371	-.384	.097	-.373	-.359	-.367	-.351	-.402	-.102	-.239	-.340

		White Collar						Clerical			Professional			Public Admin.	
		Males			Females			T	Males	Females	T	Males	Females	Males	
		1940	1960	1960-40	1940	1960	1960-40	1960			1960			1930	1940
	Variable Number	64	65	66	67	68	69	70	71	72	73	74	75	76	77
88	Equip/Land 1950	.121	.276	.415	.283	.561	.262	.228	.196	.317	.256	.234	.241	-.055	-.066
89	Farm Mechanized 1950	.711	.706	.565	.779	.779	-.240	.748	.733	.765	.641	.569	.438	.523	.567
90	Farm Non-mech 1950	.060	-.066	-.194	-.290	-.369	-.009	-.032	-.000	-.145	-.133	-.013	-.284	.054	.158
91	AgInc under $500 1960*	.792*	.708*	.461*	.845*	.686*	-.460*	.317*	.807*	.819*	.628*	.606*	.405*	.674*	.713*
92	Returns Glic 1930	.581	.422	.152	.563	.294	-.512	.521	.528	.493	.442	.527	.260	.625	.631
93	Returns Glick 1950	.634	.462	.177	.643	.376	-.535	.601	.598	.594	.414	.506	.140	.681	.636
94	Returns Glick 1950-1930	.579	.416	.153	.597	.348	-.496	.557	.551	.554	.355	.441	.067	.642	.580
Manufacturing and mining															
95	Mfg/EcAct M 1930	.445	.538	.542	.246	.531	.284	.449	.452	.448	.520	.375	.555	.021	.165
96	Mfg/EcAct M 1940	.493	.654	.649	.275	.550	.262	.499	.500	.460	.610	.453	.506	.128	.250
97	Mfg/EcAct M 1960	.453	.696	.764	.295	.592	.282	.542	.543	.493	.595	.506	.356	.070	.214
98	Mfg/EcAct M 1960-1940	.166	.378	.492	.176	.358	.174	.311	.309	.297	.287	.311	.059	-.079	-.006
99	Mfg F/M+F Mfg 1930	-.446	-.436	-.357	-.432	-.408	.166	-.363	-.374	-.370	-.338	-.220	-.388	-.305	-.344
100	Mfg F/M+F Mfg 1940	-.188	-.168	-.116	-.332	-.193	.279	-.122	-.121	-.155	-.279	-.215	-.324	-.243	-.220
101	Mfg F/M+F Mfg 1960	-.457	-.421	-.262	-.530	-.391	.341	-.426	-.424	-.464	-.482	-.441	-.475	-.469	-.430
102	Mfg Inc $1500+ 1960	.623	.664	.555	.791	.720	-.333	.758	.732	.810	.597	.687	.271	.428	.524
103	Mfg Inc under $500 1960	-.797	-.769	-.547	-.810	-.706	.381	-.956	-.844	-.840	-.710	-.782	-.368	-.657	-.728
104	Mfg Glick 1950	.683	.664	.460	.660	.523	-.378	.688	.685	.654	.641	.639	.378	.486	.601
105	Pay/Emp Fact 1930	.626	.657	.541	.659	.595	-.284	.653	.647	.648	.511	.587	.227	.408	.529
106	Pay/Emp Fact 1940	.218	.297	.338	.342	.448	.029	.365	.342	.430	.115	.137	-.028	.023	.014
107	Pay/Emp Fact 1950	.339	.478	.540	.509	.632	-.004	.472	.445	.537	.413	.490	.203	.055	.227
108	Pay/Emp Fact 1955	.125	.154	.191	.426	.391	-.179	.200	.175	.327	.139	.134	.161	.002	-.008
109	Pay/Emp Fact 1955/1940	-.004	-.020	-.027	.077	.113	.021	-.060	-.068	-.051	.139	.089	.201	-.044	-.012
Mining															
110	Mining/EcAct M 1930	.186	.184	.191	.369	.471	.014	.214	.190	.287	.292	.191	.460	-.029	.045
111	Mining/EcAct M 1940	.169	.179	.181	.428	.413	-.152	.238	.210	.339	.187	.141	.289	-.018	.040
112	Mining/EcAct M 1960	.172	.090	.016	.347	.259	-.221	.196	.180	.287	.197	.135	.376	.101	.090

		White Collar						Clerical			Professional			Public Admin.	
		Males			Females			T	Males	Females	T	Males	Females	Males	
		1940	1960	1960-40	1940	1960	1960-40	1960			1960			1930	1940
	Variable Number	64	65	66	67	68	69	70	71	72	73	74	75	76	77
	Employment of youth														
62	Employ 8-11 M 1960	-.665	-.648	-.490	-.754	-.677	.330	-.680	-.666	-.715	....	-.662	-.618	....	-.535
63	Employ 8-11 F 1960	-.610	....	-.435	-.701	....	.226	-.599	....	....	....	-.583	-.547	....	-.440
	Adult schooling														
	Low levels:														
254	6 + 0 Sch M 1940*	.761*	.650*	.393*	.633*	.445*	-.511*	.726*	.740*	.653*	.650*	.644*	.449*	.604*	.732*
255	6 + 0 Sch F 1940*	.843*	.730*	.448*	.786*	.556*	-.534*	.809*	.818*	.750*	.729*	.709*	.523*	.676*	.786*
261	6 + 6 + Yr Sch M 1940	.924	.900	.661	.786	.753	-.283	.925	.928	.871	.790	.742	.491	.617	.729
262	6 + 6 + Yrs Sch F 1940	.888	.909	.718	.804	.844	-.199	.912	.908	.891	.823	.743	.584	.526	.648
226	Adult 25 + 0 M 1950	-.859	-.793	-.553	-.882	-.742	.452	-.945	-.842	-.842	-.784	-.741	-.616	-.650	-.716
227	Adult 25 + 0 F 1950	-.813	-.738	-.515	-.825	-.759	.338	-.912	-.801	-.841	-.686	-.660	-.547	-.566	-.648
228	Adult 30 + 0 M 1960	-.851	-.794	-.563	-.879	-.746	.440	-.954	-.851	-.853	-.813	-.752	-.662	-.633	-.691
229	Adult 30 + 0 F 1960	-.832	-.790	-.581	-.907	-.835	.373	-.842	-.932	-.977	-.824	-.715	-.756	-.576	-.629
258	Adult 0 Sch M 1950-1960	-.563	-.479	-.288	-.575	-.465	.320	-.479	-.477	-.487	-.454	-.433	-.374	-.470	-.517
	High levels:														
236	Adult 25+7+M 1950	.915	.919	.691	.832	.782	-.319	.951	.950	.908	.841	.840	.506	.631	.748
237	Adult 25+7+F 1950	.843	.894	.733	.812	.870	-.177	.904	.896	.899	.829	.807	.593	.486	.601
238	Adult 30+7+M 1960	.911	.941	.741	.796	.812	-.227	.961	.960	.911	.865	.848	.543	.563	.722
239	Adult 30+7+F 1960	.835	.909	.773	.792	.884	-.129	.901	.892	.890	.858	.802	.628	.431	.586
240	Adult 25+10+M 1950	.897	.929	.725	.762	.776	-.217	.931	.931	.880	.849	.836	.492	.575	.724
241	Adult 25+10+F 1950	.784	.860	.743	.683	.816	-.044	.847	.844	.826	.775	.757	.514	.383	.532
242	Adult 30+10+M 1960	.891	.937	.746	.756	.801	-.176	.940	.937	.887	.880	.864	.545	.536	.705
243	Adult 30+10+F 1960	.807	.897	.782	.726	.863	-.052	.865	.857	.847	.860	.790	.639	.368	.555
248	Adult 15+Bac M 1940	.583	.657	.588	.288	.504	.183	.580	.591	.535	.508	.470	.328	.238	.350
249	Adult 15+Bac F 1940	.342	.531	.744	.199	.632	.483	.481	.472	.511	.445	.385	.314	-.136	.041
250	Adult 15+Un M 1940	.773	.860	.736	.619	.696	-.094	.857	.859	.828	.640	.650	.300	.386	.508
251	Adult 15+Un F 1940	.789	.874	.771	.701	.813	-.076	.878	.971	.868	.687	.664	.383	.391	.521

	Agriculture																
	Economically Active in Ag. Males				Ejidos/ Ag.Pop.	Ag. Labor		Ag. Proprietors			Equip/ Land	Farms Mech.	Farms Non-mech.	Ag.Inc under $500	Returns Glick		
	1930*	1940*	1960*	1960-40	1940	1940	1960	1940	1960	1960-40	1950	1950	1950	1960	1930	1950	1950-30
Variable Number	78	79	80	81	82	83	84	85	86	87	88	89	90	91*	92	93	94
Agriculture																	
78 Ag/EcAct M 1930*	1.000	.932**	.804**	-.007*	.050*	-.258*	.157*	.124*	-.149*	-.161*	.169*	.609*	-.028*	.639**	.388*	.428*	.383*
79 Ag/EcAct M 1940*	.932**	1.000	.902**	-.105*	.004*	-.143*	.396*	.092*	-.375*	-.343*	.354*	.694*	-.156*	.681**	.309*	.391*	.359*
80 Ag/EcAct M 1960*	.804**	.902**	1.000	-.500*	.065*	-.130*	.479*	.037*	-.458*	-.385*	.348*	.669*	-.149*	.643**	.326*	.347*	.312*
81 Ag/EcAct M 1960-1940	-.007*	-.105*	-.500*	1.000	-.022	-.011	-.263	.050	.253	.183	-.148	-.191	.066	-.146*	-.113	-.093	-.089
82 Ejidos/AgPop 1940	.050*	.004*	.065*	-.022	1.000	-.196	-.059	-.580	.096	.439	-.029	-.048	-.115	-.273*	.024	-.235	-.284
83 AgLabor/Ag M 1940	-.258*	-.143*	-.130*	-.011	-.196	1.000	.450	-.297	-.451	-.216	.260	.195	-.207	-.020*	-.195	.099	.207
84 AgLabor/Ag M 1960	.157*	.396*	.479*	-.263	-.059	.450	1.000	-.081	-.994	-.810	.665	.567	-.436	.471*	.143	.167	.189
85 AgProp/Ag M 1940	.124*	.092*	.037*	.050	-.580	-.297	-.081	1.000	.063	-.486	-.116	-.039	.168	.390*	.170	.195	.191
86 AgProp/Ag M 1960	-.149*	-.375*	-.458*	.253	.096	-.451	-.994	.063	1.000	.824	-.645	-.566	.433	-.479*	-.148	-.160	-.181
87 AgProp/Ag M 1960-1940	-.161*	-.343*	-.385*	.183	.439	-.216	-.810	-.486	.824	1.000	-.459	-.438	.245	-.618*	-.234	-.238	-.248
88 Equip/Land 1950	.169*	.354*	.348*	-.148	-.029	.260	.665	-.116	-.645	-.459	1.000	.556	-.759	.314*	-.182	.036	.102
89 Farm Mechanized 1950	.609*	.694*	.669*	-.191	-.048	.195	.567	-.039	-.566	-.438	.556	1.000	-.447	.790*	.362	.620	.640
90 Farm Non-mech 1950	-.028*	-.156*	-.149*	.066	-.115	-.207	-.436	.168	.433	.245	-.759	-.447	1.000	-.219*	.248	.017	-.054
91 AgInc under $500 1960*	.639**	.681**	.643**	-.146	-.273*	-.020*	.471*	.390*	-.479*	-.618*	.314*	.790*	-.219*	1.000	.572*	.678*	.657*
92 Returns Glick 1930	.388*	.309*	.326*	-.113	.024	-.195	.143	.170	-.148	-.234	-.182	.362	.248	.572*	1.000	.764	.647
93 Returns Glick 1950	.423*	.391*	.347*	-.093	-.235	.099	.167	.195	-.160	-.238	.036	.620	.017	.678*	.764	1.000	.984
94 Returns Glick 1950-1930	.383*	.359*	.312*	-.089	-.284	.207	.189	.191	-.181	-.248	.102	.640	-.054	.657*	.647	.984	1.000
Manufacturing and mining																	
95 Mfg/EcAct M 1930	.617*	.632*	.598*	-.169	.033	-.346	.021	.007	-.016	.010	.206	.254	.004	.175*	.044	.009	-.036
96 Mfg/EcAct M 1940	.654*	.752*	.765*	-.305	.005	-.089	.349	-.016	-.324	-.264	.320	.322	-.134	.269*	.008	-.015	-.033
97 Mfg/EcAct M 1960	.529*	.631*	.785*	-.572	.184	-.177	.350	-.121	-.314	-.172	.390	.346	-.193	.197*	-.056	-.009	-.007
98 Mfg/EcAct M 1960-1940	.179*	.233*	.415*	-.551	.127	-.235	.086	-.069	-.061	.023	.272	.154	-.158	.038*	-.174	-.008	.025
99 Mfg F/M+F Mfg 1930	-.496*	-.511*	-.539*	.219	-.248	.286	-.187	.101	.163	.055	-.354	-.388	.361	-.261*	-.099	-.168	-.158
100 Mfg F/M+F Mfg 1940	-.213*	-.223*	-.280*	.161	-.428	.146	-.227	.117	.195	.078	-.290	-.151	.383	-.083*	-.159	-.078	-.049
101 Mfg F/M+F Mfg 1960	.459*	-.448*	-.477*	.169	-.417	.064	-.176	.211	.138	-.049	-.241	-.346	.299	-.302*	-.411	-.376	-.331
102 Mfg Inc $1500+ 1960	.365*	.497*	.554*	.318	-.244	.131	.581	.263	-.577	-.618	.433	.761	-.279	.539*	.510	.647	.637
103 Mfg Inc. under $500 1960	-.559*	-.650*	-.713*	.329	.167	-.042	-.569	-.248	.557	.590	-.391	-.752	.196	-.885*	-.599	-.696	-.669
104 Mfg Glick 1950	.603*	.644*	.691*	-.363	-.002	-.046	.273	.086	-.253	-.242	.225	.530	-.095	.582*	.399	.449	.413

		Agriculture																
		Economically Active in Ag. Males				Ejidos/ Ag.Pop.	Ag. Labor		Ag. Proprietors			Equip/ Land	Farms Mech.	Farms Non-mech.	Ag.Inc under $500	Returns Glick		
		1930*	1940*	1960*	1960-40	1940	1940	1960	1940	1960	1960-40	1950	1950	1950	1960	1930	1950	1950-30
	Variable Number	78	79	80	81	82	83	84	85	86	87	88	89	90	91*	92	93	94
105	Pay/Emp Fact 1930	.533*	.591*	.629*	-.322	-.082	-.177	.536	.217	-.525	-.548	.491	.585	-.289	.647*	.463	.481	.439
106	Pay/Emp Fact 1940	.208*	.322*	.279*	-.117	-.176	.250	.343	.055	-.320	-.248	.624	.497	-.433	.398*	-.116	.202	.278
107	Pay/Emp Fact 1950	.197*	.380*	.440*	-.292	-.172	.041	.649	.243	-.653	-.655	.669	.517	-.422	.559*	.155	.224	.224
108	Pay/Emp Fact 1955	.113*	.215*	.144*	-.059	-.076	.054	.244	.142	-.229	-.238	.493	.325	-.380	-.345*	.022	.169	.191
109	Pay/Emp Fact 1955/1940	.104	.106	.045	.033	.165	-.145	.063	-.139	-.082	.008	.181	.095	-.174	.015*	-.057	-.125	-.148
	Mining																	
110	Mining/EcAct M 1930	.220*	.377*	.219*	.222	.033	-.010	.396	.007	-.406	-.333	.500	.451	-.380	.316*	-.103	-.055	-.048
111	Mining/EcAct M 1940	.167*	.340*	.192*	.170	-.162	.100	.415	.177	-.415	-.436	.539	.445	-.471	.406*	-.038	.150	.186
112	Mining/EcAct M 1950	.228*	.304*	.164*	.230	.052	.068	.163	.059	-.156	-.142	.269	.229	-.188	.186*	.022	.073	.080
	Employment of youth																	
62	Employ 8-11 M 1960	....	-.663*	-.679*	.232	-.119	.169	-.404	-.141	.356	.385	-.406	-.584	....	-.644*	....	....	-.409
63	Employ 8-11 F 1960	....	-.651*	-.357*	.036	-.041	.093	-.413	-.015	.360	.304	....	.589	....	-.620*	....	....	-.461
	Adult schooling																	
	Low levels:																	
254	6 + 0 Sch M 1940*	.615**	.590**	.624**	-.229*	-.075*	-.459*	.130*	.513*	-.125*	-.371*	-.056*	.416*	.185*	.623**	.674*	.557*	.470*
255	6 + 0 Sch F 1940*	.694**	.684**	.694**	-.219	-.057	-.359	.209	.414	-.202	-.380	.085*	.566	.087	.724**	.707*	.651*	.571*
261	6 + 6 + Yrs Sch M 1940	.898*	.919*	.837*	-.261	-.046	-.154	.324	.164	-.304	-.316	.299	.736	-.070	.732*	.419	.556	.528
262	6 + 6 + Yrs Sch F 1940	.979*	.948*	.902*	-.243	-.013	-.107	.412	.087	-.392	-.368	.409	.790	-.195	.735*	.340	.486	.466
226	Adult 25 + 0 M 1950	-.783*	-.824*	-.794*	.231	.097	.271	-.352	-.308	.342	.447	-.326	-.699	.198	-.794*	-.502	-.597	-.553
227	Adult 25 + 0 F 1950	-.693*	-.770*	-.713*	.146	.194	.097	-.408	-.254	.403	.458	-.365	-.730	.216	-.525*	-.453	-.621	-.592
228	Adult 30 + 0 M 1960	-.800*	-.828*	-.810*	.256	.032	.297	-.295	-.276	.281	.371	-.327	-.685	.192	-.757*	-.494	-.575	-.532
229	Adult 30 + 0 F 1960	-.781*	-.845*	-.775*	.153	.000	.186	-.324	-.146	.311	.318	-.379	-.791	.307	-.785*	-.441	-.572	-.539
258	Adult 0 Sch M 1950-1960	-.440*	-.540*	-.438*	-.031	.160	.105	-.314	-.224	.307	.389	-.123	-.450	.165	-.542*	-.279	-.443	-.430
	High levels:																	
236	Adult 25+7+M 1950	.912*	.854*	.875*	-.337	-.080	-.163	.366	.173	-.357	-.378	.222	.736	-.055	.781*	.501	.560	.512
237	Adult 25+7+F 1950	.798*	.878*	.873*	-.300	-.016	-.147	.403	.032	-.395	-.320	.430	.774	-.207	.707*	.315	.411	.380
238	Adult 30+7+M 1960	.310*	.870*	.909*	-.366	-.093	-.166	.397	.181	-.393	-.416	.256	.732	-.019	.774*	.453	.498	.451
239	Adult 30+7+F 1960	.785*	.996*	.909*	-.332	-.006	-.150	.464	.062	-.450	-.397	.438	.760	-.198	.702*	.281	.369	.341

	Agriculture															
	Economically Active in Ag. Males				Ejidos/ Ag.Pop.	Ag. Labor		Ag. Proprietors			Equip/ Land	Farms Mech.	Farms Non-mech	Ag.Inc under $500	Returns Click		
	1930*	1940*	1960*	1960-40	1940	1940	1960	1940	1960	1960-40	1950	1950	1950	1960*	1930	1950	1950-30
Variable Number	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
240 Adult 25+10+M 1950	.787*	.841*	.878*	-.369	-.098	-.130	.381	.150	-.372	-.386	.169	.698	.024	.753*	.486	.527	.478
241 Adult 25+10+F 1950	.761*	.313*	.839*	-.359	-.019	-.159	.318	.011	-.317	-.244	.331	.682	-.054	.590*	.248	.312	.280
242 Adult 30+10+M 1960	.779*	.852*	.900*	-.388	-.129	-.130	.406	.165	-.403	-.425	.217	.699	.000	.756*	.444	.481	.434
243 Adult 30+10+F 1960	.754*	.882*	.904*	-.347	-.018	-.159	.448	.060	-.433	-.398	.393	.697	-.137	.641*	.208	.296	.270
248 Adult 15+Bas M 1940	.629*	.649*	.646*	-.248	.054	-.071	.077	-.171	-.036	.087	.164	.389	.188	.194*	.085	.160	.145
249 Adult 15+Bas F 1940	.354*	.475*	.546*	-.346	.144	-.043	.105	-.199	-.150	.027	.362	.369	-.038	.103*	-.144	-.078	-.080
250 Adult 15+Un M 1940	.750*	.797*	.789*	-.313	-.123	-.102	.168	.097	-.137	-.123	.308	.600	.021	.536*	.210	.410	.404
251 Adult 15+Un F 1940	.741*	.834*	.827*	-.328	-.106	-.024	.385	.093	-.356	-.305	.458	.777	-.191	.660*	.224	.454	.465

		Manufacturing															Mining		
		Economically Active Males				% of Females in Mfg Work Force			Income $1500+	Income Under $500	Mfg Glick	Pay/Number Employed in Factory					Economically Active Males		
		1930	1940	1960	1960-40	1930	1940	1960	1960	1960	1950	1930	1940	1950	1955	1955/40	1930	1940	1960
	Variable Number	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
Manufacturing and mining																			
95	Mfg/EcAct M 1930	1.000	.796	.606	.223	-.406	-.037	-.107	.008	-.112	.239	.289	.049	.107	-.086	.125	.140	-.015	-.010
96	Mfg/EcAct M 1940	.796	1.000	.785	.256	-.422	-.184	-.225	.097	-.240	.359	.377	.072	.161	-.030	.146	.120	.023	-.030
97	Mfg/EcAct M 1960	.606	.785	1.000	.764	-.505	-.263	-.343	.196	-.326	.339	.486	.260	.303	.012	.039	.086	.067	-.001
98	Mfg/EcAct M 1960-40	.223	.256	.764	1.000	-.330	-.155	-.230	.156	-.206	.124	.347	.374	.300	.138	-.040	.044	.139	.047
99	Mfg F/M+F Mfg 1930	-.406	-.422	-.505	-.330	1.000	.724	.594	-.187	.306	-.393	-.542	-.138	-.258	-.272	-.029	.044	-.037	-.150
100	Mfg F/M+F Mfg 1940	-.037	-.184	-.263	-.155	.724	1.000	.731	-.144	.231	-.292	-.463	.072	-.261	-.341	-.187	.141	.110	-.111
101	Mfg F/M+F Mfg 1960	-.107	-.225	-.343	-.230	.594	.731	1.000	-.375	.494	-.535	-.456	-.115	-.267	-.295	-.036	.049	-.102	-.374
102	Mfg Inc $1500+ 1960	.008	.097	.196	.156	-.187	-.144	-.375	1.000	-.910	.611	.704	.513	.762	.465	-.009	.329	.501	.311
103	Mfg Inc under $500 1960	-.112	-.240	-.326	-.206	.306	.231	.494	-.910	1.000	-.706	-.737	-.449	-.645	-.329	.047	-.234	-.370	-.241
104	Mfg Glick 1950	.239	.359	.339	.124	-.393	-.292	-.535	.611	-.706	1.000	.603	.342	.469	.384	.295	.203	.295	.314
105	Pay/Emp Fact 1930	.289	.377	.486	.347	-.542	-.463	-.456	.704	-.737	.603	1.000	.400	.740	.420	.163	.152	.302	.083
106	Pay/Emp Fact 1940	.049	.072	.260	.374	-.188	.072	-.115	.513	-.449	.342	.400	1.000	.515	.555	-.120	.405	.632	.444
107	Pay/Emp Fact 1950	.107	.161	.303	.300	-.258	-.261	-.267	.762	-.645	.469	.740	.515	1.000	.633	.261	.469	.592	.305
108	Pay/Emp Fact 1955	-.086	-.030	.012	.138	-.272	-.341	-.295	.465	-.329	.384	.420	.555	.633	1.000	.381	.452	.550	.444
109	Pay/Emp Fact 1955/1940	.125	.146	.039	-.040	-.029	-.187	-.036	-.009	.047	.295	.163	-.120	.261	.381	1.000	.446	.115	-.067
Mining																			
110	Mining/EcAct M 1930	.140	.120	.086	.044	.044	.141	.049	.329	-.234	.203	.152	.405	.469	.452	.446	1.000	.807	.553
111	Mining/EcAct M 1940	-.015	.023	.067	.139	-.037	.110	-.102	.501	-.370	.295	.302	.632	.592	.550	.115	.807	1.000	.727
112	Mining/EcAct M 1960	-.010	-.030	-.001	.047	-.150	-.111	-.374	.311	-.241	.314	.083	.444	.305	.444	-.067	.553	.727	1.000
Employment of youth																			
62	Employ 8-11 M 1960	....	-.408	-.442	-.169	....	.541	.581	....	.727	....	-.604	-.275	-.401	-.296	.056	....	-.237	....
63	Employ 8-11 F 1960	....	....	....	-.022	....	....	....	....	.670	....	-.581	....	-.440	....	-.127	....	-.299	....

		Manufacturing							Mining										
		Economically Active Males				% of Females in Mfg. Work Force			Income $1500+	Income Under $500	Mfg Click	Pay/Number Employed in Factory					Economically Active Males		
		1930	1940	1960	1960-40	1930	1940	1960	1960	1960	1950	1930	1940	1950	1955	1955/40	1930	1940	1960
	Variable Number	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
Adult schooling																			
	Low levels:																		
254	6 + 0 Sch M 1940*	.352*	.316*	.286*	.086*	-.284*	-.151*	-.276*	.458*	-.636*	.456*	.498*	-.052*	.206*	-.035*	-.144*	.058*	.059*	.039*
255	6 + 0 Sch F 1940*	.355*	.344*	.305*	.090*	-.304*	-.151*	-.351*	.561*	-.729*	.534*	.540*	.048*	.253*	.035*	-.110*	.150*	.153*	.100*
261	6 + 6 + Yrs Sch M 1940	.557	.639	.614	.309	-.477	-.236	-.416	.601	-.741	.700	.684	.340	.397	.211	.107	.207	.174	.134
262	6 + 6 + Yrs Sch F 1940	.584	.673	.641	.326	-.460	-.206	-.412	.637	-.735	.679	.666	.424	.470	.279	.139	.363	.320	.229
226	Adult 25 + 0 M 1950	-.438	-.477	-.426	-.204	.578	.418	.479	-.662	.775	-.661	-.733	-.238	-.504	-.379	-.099	-.249	-.275	-.238
227	Adult 25 + 0 F 1950	-.429	-.395	-.302	-.080	.488	.204	.416	-.760	.804	-.728	-.665	-.445	-.575	-.424	-.101	-.385	-.460	-.393
228	Adult 30 + 0 M 1960	-.470	-.482	-.448	-.222	.558	.396	.525	-.634	.765	-.701	-.678	-.247	-.461	-.346	-.076	-.252	-.281	-.297
229	Adult 30 + 0 F 1960	-.468	-.462	-.378	-.134	.449	.243	.467	-.666	.734	-.638	-.553	-.317	-.439	-.369	-.114	-.440	-.414	-.343
258	Adult 0 Sch M 1950-1960	-.174	-.307	-.208		.429	.378	.243	-.415	.435	-.201	-.468	-.015	-.329	-.311	-.131	-.169	-.143	-.026
	High levels:																		
236	Adult 25+7+M 1950	.469	.559	.538	.245	-.418	-.240	-.425	.698	-.806	.727	.682	.244	.442	.170	.123	.189	.130	.092
237	Adult 25+7+F 1950	.531	.574	.597	.344	-.445	-.213	-.420	.670	-.740	.693	.634	.382	.523	.284	.195	.408	.308	.252
238	Adult 30+7+M 1960	.525	.582	.575	.285	-.358	-.118	-.347	.695	-.805	.722	.645	.277	.482	.141	.083	.276	.220	.161
239	Adult 30+7+F 1960	.557	.620	.652	.379	-.430	-.175	-.371	.670	-.744	.691	.636	.399	.548	.258	.144	.454	.382	.305
240	Adult 25+10+M 1950	.515	.615	.558	.231	-.364	-.177	-.351	.664	-.760	.681	.643	.185	.420	.120	.129	.149	.070	.016
241	Adult 25+10+F 1950	.619	.600	.628	.376	-.436	-.168	-.301	.557	-.610	.606	.574	.292	.464	.224	.219	.315	.149	.149
242	Adult 30+10+M 1960	.537	.608	.561	.251	-.303	-.084	-.298	.676	-.778	.705	.612	.224	.464	.117	.108	.252	.179	.108
243	Adult 30+10+F 1960	.602	.660	.666	.374	-.417	-.152	-.300	.612	-.678	.654	.537	.339	.520	.232	.157	.441	.341	.274
248	Adult 15+Bac M 1940	.628	.627	.605	.275	-.315	.024	-.230	.147	-.260	.348	.207	.173	-.018	-.100	-.127	.032	-.094	.040
249	Adult 15+Bac F 1940	.643	.536	.604	.345	-.270	.050	-.088	.206	-.176	.184	.199	.315	.222	.022	-.094	.192	.032	.071
250	Adult 15+Un M 1940	.537	.606	.641	.393	-.372	-.045	-.312	.503	-.575	.583	.501	.386	.277	.126	-.057	.086	.095	.083
251	Adult 15+Un F 1940	.519	.576	.653	.423	-.336	-.017	-.300	.648	-.692	.596	.602	.593	.459	.248	-.051	.334	.360	.220

TABLE 61

CORRELATION MATRIX: EDUCATION VARIABLES AGAINST EACH OTHER: LITERACY OF POPULATION AND DIFFERENCES IN LITERACY BY AGE, SEX AND RESIDENCE; ADULT LEVELS OF SCHOOLING; ENROLLMENT RATES BY YEAR, RESIDENCE, INCOME AND OCCUPATION; PROGRESS IN SCHOOL—CONTINUATION RATE, AGE GRADE LEVELS, PASS RATES, AND SCHOOL FACILITIES

									Literacy										
		Age 10+		Age 40+				Age 6+0 School	Literacy of Youth 10-14 Yrs.						Changes in Literacy of Youth 10-14 Yrs.				Lit. 6+ Yrs.
		1940	1960	1940		1960		1940	1930		1940		1960		1940-1930		1960-1940		1960-1950/ 1960-1940
		T		M	F	M	F	M	M	F*	M	F	M	F	M	F	M*	F*	
	Variable Number	140	141	145	146	147	148	153	155	156	157	158	159	160	161	162	163	164	165
	Adult levels of education																		
	Low levels																		
226	Adult 25 + 0 M 1950	-.957	-.932	-.954	-.903	-.966	-.887	....	....	....	....	....	....	....	....	....	....	....	....
227	Adult 25 + 0 F 1950	-.873	-.945	-.830	-.888	-.844	-.870	....	....	....	....	....	....	....	....	....	....	....	....
228	Adult 30 + 0 M 1960	-.952	-.953	-.435	-.885	-.977	-.891	.341	-.923	.846*	-.958	-.935	-.964	-.937	-.664	-.597	-.645*	-.669*	.413
229	Adult 30 + 0 F 1960	-.964	-.983	-.889	-.963	-.963	-.990	.326	-.843	.878*	-.901	-.948	-.931	-.959	-.688	-.589	-.530*	-.670*	.315
	High levels																		
236	Adult 25+7+M 1950	.898	.806	.876	.880	.852	.816	-.578	.800	-.865*	.890	.894	.797	.795	.654	.622	.746*	.822*	-.378
237	Adult 25+7+F 1950	.869	.820	.818	.881	.836	[illegible]	-.603	.733	-.823*	.820	.860	.771	.793	.631	.569	.618*	.743*	-.282
238	Adult 30+7+M 1960	.875	.806	.835	.865	.836	.813	-.565	.761	-.827*	.872	.888	.796	.791	.710	.678	.705*	.818*	-.299
239	Adult 30+7+F 1960	.857	.827	.807	.865	.838	.847	-.579	.734	-.808*	.818	.858	.796	.813	.648	.587	.571*	.706*	-.245
240	Adult 25+10+M 1950	.858	.755	.843	.857	.806	.778	....	....	....	....	....	....	....	....	....	....	....	.....
241	Adult 25+10+F 1950	.781	.719	.750	.793	.756	.750	....	....	....	....	....	....	....	....	....	....	....	.....
242	Adult 30+10+M 1960	.855	.775	.822	.859	.809	.797	-.548	.733	-.813*	.845	.863	.767	.761	.690	.467	.690*	.811*	-.302
243	Adult 30+10+F 1960	.822	.793	.798	.838	.812	.817	-.597	.704	-.776*	.783	.818	.771	.777	.614	.545	.585*	.649*	-.247
248	Adult 15+Bac M 1940	.481	.473	.471	.462	.490	.445	....	....	....	....	....	....	....	....	....	....	....	.....
249	Adult 15+Bac F 1940	.337	.354	.299	.359	.339	.359	....	....	....	....	....	....	....	....	....	....	....	.....
250	Adult 15+Un M 1940	.719	.657	.680	.697	.695	.663	....	....	....	....	....	....	....	....	....	....	....	.....
251	Adult 15+Un F 1940	.788	.744	.727	.793	.731	.760	....	....	....	....	....	....	....	....	....	....	....	.....
	Enrollment																		
267	Enrol 6-14 M 1930	.731	.685	....	....	....	....	....	.912	-.744*	.762	.700	.766	.737	.371	.159	.482*	.431*	.506
265	Enrol 6-14 T 1937	.748	.698	.728	.695	.650	.631	-.055	.703	-.702*	.775	.787	.737	.743	.627	.638	.582*	.656*	-.338
266	Enrol 6-14 T 1960+	-.640*	-.637*	-.668*	-.555*	-.645*	-.513*	-.088*	-.785*	.569*	-.697*	-.675*	-.785*	-.719*	-.413*	-.442*	-.416**	-.419**	.234*

									Literacy										
		Age 10+		Age 40+				Age 6+0 School	Literacy of Youth 10-14 Yrs.						Changes in Literacy of Youth 10-14 Yrs.				Lit. 6+ Yrs.
		1940	1960	1940		1960		1940	1930		1940		1960		1940-1930		1960-1940		1960-1950/ 1960-1940
		T		M	F	M	F	M	M	F*	M	F	M	F	M	F	M*	F*	
	Variable Number	140	141	145	146	147	148	153	155	156	157	158	159	160	161	162	163	164	165
273	Enrol 6-14 Urban 1960	.213	.214	....	....	....	....	.017	.148	-.144*	.183	.252	.180	.233	.207	.325	.143*	.233*	-.173
274	Enrol 6-14 Rural 1960	.359	.377	....	....	....	....	.152	.503	-.343*	.443	.364	.524	.472	.196	.155	.142*	.068*	-.169
275	Enrol 6-14 U-R 1960	-.090	-.099	....	....	....	....	-.074	-.219	.128*	-.160	-.068	-.214	-.145	.006	.109	.007*	.100*	.002
	Enrol and income in pesos monthly 1959																		
278	Enrol 6/Inc $200	....	....	....	....	....	....	....	-.009	.020*	.038	.011	-.006	-.010	....	....	....	....	....
280	Enrol 6/$601 to $1,000	....	....	....	....	....	....	....	.220	-.144*	.227	.242	.207	.209	....	....	....	....	....
282	Enrol 6/(601-1,000)-(200)	....	....	....	....	....	....	....	-.247	.353*	-.362	-.342	-.271	-.301	....	....	....	....	....
	Enrol and occupation of father 1959																		
283	Enrol 6/Agriculture	....	....	....	....	....	....	....	.483	-.366*	.468	.454	.470	.453	....	....	....	....	....
284	Enrol 6/Professional	....	....	....	....	....	....	....	.271	-.237*	.248	.247	.257	.258	....	....	....	....	....
285	Enrol 6/Prof-Ag	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Progress in school Continuation rates--primary school																			
	Beginning of year enrollment																		
288	B 4/3 Urban 1942	....	....	....	....	....	....	....	....	....	....	....	....	....	.123	.102	-.116*	-.112*	.312
293	B 4/3 Rural 1942	.459	.382	....	....	....	....	-.358	.517	-.489*	.477	.437	.433	.422	.161	.179	.382*	.334*	-.374
296	B 4/3 Urban-Rural 1942	-.473	-.317	....	....	....	....	.361	-.512	.570*	-.483	-.438	-.341	-.329	-.111	-.134	-.557*	-.491*	.668
299	B 4/3 Urban 1960*	.083*	.045*	....	....	....	....	....	....	....	-.007*	.087*	....	....	.095*	.190*	-.011**	.218**	.042*
304	B 4/3 Rural 1960	.214	.165	....	....	....	....	.039	.372	-.316*	.245	.168	.302	.237	-.124	-.195	.048*	-.011*	-.228
307	B 4/3 Urban-Rural 1960	-.283	-.207	....	....	....	....	.023	-.428	.353*	-.280	-.223	-.344	-.272	.132	.172	-.054*	-.067*	.234
308	4/3 Urban 1960-1942	-.125	-.183	....	....	....	....	.143	-.100	....	-.103	-.136	....	....	-.154	-.192	.061*	-.048*	-.309
309	4/3 Rural 1960-1942	-.222	-.194	....	....	....	....	.361	-.116	....	-.219	-.251	....	....	-.295	-.371	-.371*	-.373*	.160
330	B 5/1 Urban 1942	.594	.565	....	....	....	....	-.489	.548	-.569*	.657	.639	.594	.581	.589	.563	.556*	.569*	-.065
331	B 5/1 Rural 1942	.347	.359	....	....	....	....	-.254	.339	-.444*	.350	.339	.379	.377	.224	.069	.139*	.170*	-.139
332	B 5/1 Urban 1960*	-.485*	-.444*	....	....	....	....	.405*	-.477*	.453**	-.528*	-.495*	-.522*	-.506*	-.403*	-.382*	-.363**	-.343**	.158*
333	B 5/1 Rural 1960	.621	.578	....	....	....	....	-.259	.603	-.733*	.613	.566	.613	.603	.305	.119	.379*	.325*	-.390

								Literacy										
	Age 10+		Age 40+				Age 6+0 School	Literacy of Youth 10-14 Yrs.						Changes in Literacy of Youth 10-14 Yrs.				Lit. 6+ Yrs.
	1940	1960	1940		1960		1940	1930		1940		1960		1940-1930		1960-1940		1960-1950/ 1960-1940
	T		M	F	M	F	M	M	F*	M	F	M	F	M	F	M*	F*	
Variable Number	140	141	145	146	147	148	153	155	156	157	158	159	160	161	162	163	164	165
Secondary school																		
338 Cont. 3/1 M 1960	.139	.131	....	....	....	....	-.030	.149	-.257*	.175	.168	.126	.133	.188	.287	.213*	.186*	-.157
339 Cont. 3/1 F 1960	.234	.259	....	....	....	....	-.288	.233	-.151*	.228	.237	.160	.233	.136	.212	.282*	.181*	-.295
Age grade progress in school																		
347 Age 10 Gr 1 MU 1963	-.716	-.734	-.666	-.701	-.692	-.702	.366	-.617	.630*	-.695	-.736	-.756	-.779	-.613	-.551	-.359*	-.472*	.031
348 Age 10 Gr 1 MR 1963	-.756	-.744	-.789	-.655	-.730	-.650	.343	-.902	.736*	-.779	-.754	-.761	-.798	-.417	-.390	-.545*	-.464*	.308
349 Age 10 Gr 1 MR-MU 1963	-.777	-.771	....	....	....	....	.358	-.794	.713*	-.770	-.737	-.795	-.792	-.421	-.366	-.453*	-.430*	.336
353 Age 12 Gr 3+ MR 1963	.613	.619	....	....	....	....	-.159	.669	-.646*	.644	.598	.696	.680	.337	.194	.323*	.255*	-.159
359 Age 10 Gr 1 FU 1963	-.744	-.748	-.691	-.699	-.694	-.687	.261	-.671	.635*	-.743	-.777	-.773	-.902	-.636	-.630	-.445*	-.534*	.116
360 Age 10 Gr 1 FR 1963	-.860	-.865	-.877	-.792	-.866	-.787	.324	-.943	.758*	-.942	-.939	-.903	-.911	-.539	-.505	-.444*	-.484*	.284
361 Age 10 Gr 1 FR-FU 1963	-.577	-.560	....	....	....	....	.214	-.693	.602*	-.625	-.566	-.561	-.595	-.208	-.201	-.573*	-.343*	.375
365 Age 12 Gr 3+ FR 1963	.643	.635	....	....	....	....	-.153	.697	-.653*	.669	.613	.706	.695	.338	.206	.366*	.301*	-.251
Pass rates																		
376 Pass 2/Pres U 1960	.319	.404	....	.....	....	....	-.161	.151	-.256*	.411	.299	.361	.376	.358	.243	-.059*	.065*	-.012
377 Pass 2/Pres R 1960	.303	.423	....	.....	....	....	-.227	.114	-.270*	.178	.255	.399	.372	.262	.096	-.110*	-.027*	-.034
School facilities																		
387 Pri. Teachers/Select 1940	.727	.679	....	....	....	....	-.205	.674	-.493*	.740	.746	.674	.686	.539	.530	.605*	.452*	-.487
388 Pri. Teachers/Select 1960	.663	.669	....	....	....	....	.020	.693	-.543*	.689	.603	.719	.714	.455	.490	.411*	.451*	-.209
389 Sch Incomplete U 1942	-.199	-.206	....	....	....	....	.129	-.175	.220*	-.201	-.203	-.195	-.205	-.270	-.145	-.135*	-.131*	.056
390 Sch Incomplete R 1942*	.343*	.297*	....	....	....	....	-.428*	.332*	-.403**	.302*	.291*	.325*	.328*	.050*	-.019*	.142**	.132**	-.170*
395 Sch Incomplete T 1960	-.666	-.623	....	....	....	....	.331	-.635	.715*	-.567	-.589	-.634	-.674	-.178	-.014	-.227*	-.304*	.343
396 Sch Incomplete U 1942-60	-.047	-.047	....	....	....	....	.164	-.205	.020*	-.073	-.072	-.091	-.064	-.184	-.175	-.017*	-.070*	-.103
397 Sch Incomplete R 1942-60	-.001	.044	....	....	....	....	.278	.005	.097*	-.062	-.011	.075	.068	-.037	-.044	-.276*	-.129*	.160

		Urban Literacy by Age 1960								Rural Literacy by Age 1960							
		Males				Females				Males				Females			
		40-49	30-39	25-29	10-14	40-49*	30-39	25-29*	10-14	40-49	30-39	25-29	10-14	40-49	30-39	25-29*	10-14*
	Variable Number	165	169	170	173	176	177	178	181	184	185	186	189	192	193	194	197
	Adult levels of education																
	Low levels																
226	Adult 25 + 0 M 1950	-.673	....	-.534	-.707	.800*	....	.738*	-.680	-.878	....	-.855	-.882	-.863	....	.847*	.868*
227	Adult 25 + 0 F 1950	-.705	....	-.540	-.744	.836*	....	.768*	-.743	-.681	....	-.673	-.697	-.811	....	.765*	.709*
228	Adult 30 + 0 M 1960	-.697	....	-.557	-.715	.807*	....	.769*	-.706	-.902	....	-.880	-.918	-.869	....	.855*	.903*
229	Adult 30 + 0 F 1960	-.713	....	-.552	-.816	.913*	....	.817*	-.825	-.815	....	-.822	-.835	-.952	....	.900*	.846*
	High levels																
236	Adult 25+7+M 1950	.682	....	.711	.738	-.752*	....	-.790*	.808	.623	....	.590	.682	.685	....	-.605*	-.688*
237	Adult 25+7+F 1950	.723	....	.661	.760	-.809*	....	-.790*	.767	.617	....	.577	.642	.743	....	-.668*	-.684*
238	Adult 30+7+M 1960	.707	....	.772	.759	-.758*	....	-.826*	.735	.599	....	.559	.670	.680	....	-.617*	-.676*
239	Adult 30+7+F 1960	.706	....	.691	.769	-.790	....	-.802*	.757	.631	....	.576	.671	.740	....	-.650*	-.699*
240	Adult 25+10+M 1950	.623	....	.689	.702	-.684*	....	-.733*	.675	.553	....	.516	.615	.606	....	-.542*	-.620*
241	Adult 25+10+F 1950	.625	....	.594	.643	-.666*	....	-.666*	.629	.533	....	.495	.556	.627	....	-.558*	-.587*
242	Adult 30+10+M 1960	.660	....	.744	.739	-.725*	....	-.758*	.716	.559	....	.538	.630	.655	....	-.589*	-.638*
243	Adult 30+10+F 1960	.649	....	.651	.732	-.733*	....	-.762*	.722	.605	....	.544	.635	.705	....	-.655*	-.653*
248	Adult 15+3se M 1960	.451	....	.413	.453	-.365*	....	-.384*	.437	.319	....	.331	.363	.370	....	-.233*	-.315*
249	Adult 15+3se F 1960	.293	....	.343	.334	-.238*	....	-.285*	.354	.264	....	.336	.216	.255	....	-.169*	-.225*
250	Adult 15+Un M 1960	.696	....	.616	.644	-.625*	....	-.617*	.668	.439	....	.408	.487	.501	....	-.380*	-.482*
251	Adult 15+Un F 1960	.739	....	.667	.764	-.734*	....	-.735*	.758	.500	....	.464	.577	.642	....	-.528*	-.584*
	Enrollment																
267	Enrol 6-14 M 1930	....	.255	....	....	....	.375	....	....	....	....	....	....	....	....	....	....
265	Enrol 6-14 T 1937	.585	.596	.627	.635	-.626*	.663	-.731*	.668	....	....	.580	.757	.583	....	-.609*	-.407*
266	Enrol 6-14 T 1960*	-.303*	-.356*	-.419*	-.461*	.337**	-.444*	-.492**	-.424*	....	....	-.390*	-.731*	-.460*	....	.435**	.464**
273	Enrol 6-14 Urban 1960	.385	.434	.311	.445	-.445*	.435	-.419*	.443	....	....	.329	.378	.229	....	-.256*	-.177*
274	Enrol 6-14 Rural 1960	-.055	-.022	.197	.065	-.026*	.064	-.176*	.091	....	....	.409	.616	.239	....	-.281*	-.540*
275	Enrol 6-14 U-R 1960	.275	.282	.064	.239	-.290*	.222	-.160*	.217	....	....	-.213	-.260	.011	....	-.022*	.207*

		Urban Literacy by Age 1960						Rural Literacy by Age 1960									
		Males				Females				Males				Females			
		40-49	30-39	[illegible]29	10-14	40-49*	30-39	25-29*	10-14	40-49	30-39	25-29	10-14	40-49	30-39	25-29*	10-14*
	Variable Number	168	169	[illegible]	173	176	177	178	181	184	185	186	189	192	193	194	197
	Enrol and income in pesos monthly 1959																
278	Enrol 6/Inc $200	····	.016	····	····	····	.017	····	····	····	····	····	····	····	····	····	····
280	Enrol 6/$601 to $1,000	····	.130	····	····	····	.155	····	····	····	····	····	····	····	····	····	····
282	Enrol 6/(601-1,000)-(200)	····	.307	····	····	····	-.358	····	····	····	····	····	····	····	····	····	····
	Enrol and occupation of father 1959																
283	Enrol 6/Agriculture	····	.303	····	····	····	.365	····	····	····	····	····	····	····	····	····	····
284	Enrol 6/Professional	····	.031	····	····	····	.137	····	····	····	····	····	····	····	····	····	····
285	Enrol 6/Prof-Ag	····	-.183	····	····	····	-.109	····	····	····	····	····	····	····	····	····	····
Progress in school Continuation rates—primary school																	
	Beginning of year enrollment																
288	B 4/3 Urban 1942	····	.012	····	····	····	-.007	····	····	····	····	····	····	····	····	····	····
293	B 4/3 Rural 1942	.202	.200	.175	.321	-.345*	.247	.303*	.269	····	····	.368	.493	.399	····	-.401*	-.450*
296	B 4/3 Urban-Rural 1942	-.231	-.220	-.162	-.295	.363*	-.270	.295*	-.267	····	····	-.333	-.368	-.321	····	.332*	.332*
299	B 4/3 Urban 1960*	····	.425*	····	····	····	.360*	····	····	····	····	····	····	····	····	····	····
304	B 4/3 Rural 1960	-.278	-.274	-.111	-.133	.037*	-.162	.006*	-.139	····	····	.297	.406	.210	····	-.239*	-.370*
307	B 4/3 Urban-Rural 1960	.141	.167	.137	.051	.058*	.053	.008*	.043	····	····	-.305	-.381	-.226	····	.217*	.335*
308	4/3 Urban 1960-1942	-.267	-.235	-.089	····	····	-.201	····	····	····	····	····	····	-.170	····	····	····
309	4/3 Rural 1960-1942	-.470	-.464	-.302	····	····	-.386	····	····	····	····	····	····	-.174	····	····	····
330	B 5/1 Urban 1942	.476	.469	.481	.543	-.488*	.464	-.545*	.487	····	····	.441	.582	.496	····	-.509*	-.606*
331	B 5/1 Rural 1942	-.016	.055	.117	.154	-.187*	.112	-.215*	.145	····	····	.279	.411	.406	····	-.444*	-.450*
332	B 5/1 Urban 1960*	-.264*	-.262*	-.511*	-.384*	.322**	-.300*	.495**	-.332*	····	····	-.415*	-.580*	-.378*	····	.388**	.573**
333	B 5/1 Rural 1960	.133	.204	.212	.272	-.399*	.302	-.378*	.283	····	····	.584	.674	.615	····	-.630*	-.713*
Secondary school																	
338	Cont. 3/1 M 1960	.316	.290	.243	.341	-.220*	.271	-.251*	.290	····	····	.166	.139	.094	····	-.148*	-.129*
339	Cont. 3/1 F 1960	.396	.384	.244	.428	-.337*	.362	-.299*	.354	····	····	.235	.177	.228	····	-.249*	-.178*

		Urban Literacy by Age 1960								Rural Literacy by Age 1960							
		Males				Females				Males				Females			
		40-49	30-39	25-29	10-14	40-49*	30-39	25-29*	10-14	40-49	30-39	25-29	10-14	40-49	30-39	25-29*	10-14*
	Variable Number	168	169	170	173	176	177	178	181	184	185	186	189	192	193	194	197
Age grade progress in school																	
347	Age 10 Gr 1 MU 1963	-.556	-.568	-.552	-.714	.677*	-.659	.730*	-.690	-.624	....	-.604	-.732	-.701	....	.719*	.803*
348	Age 10 Gr 1 MR 1963	-.460	-.478	-.323	-.546	.559*	-.554	.523*	-.530	-.751	....	-.714	-.840	-.651	....	.666*	.823*
349	Age 10 Gr 1 MR-MU 1963	-.463	-.466	-.259	-.530	.565*	-.560	.486*	-.507	....	....	-.784	-.831	-.693	....	.680*	.778*
353	Age 12 Gr 3+ MR 1963	.153	.176	.249	.285	-.354*	.290	-.420*	.273	....	....	.658	.802	.606	....	-.636*	-.826*
359	Age 10 Gr 1 FU 1963	-.647	-.642	-.609	-.754	.704*	-.726	.773*	-.766	-.601	....	-.617	-.747	-.655	....	.690*	.753*
360	Age 10 Gr 1 FR 1963	-.577	-.583	-.431	-.689	.690*	-.696	.660*	-.675	-.814	....	-.919	-.920	-.774	....	.757*	.974*
361	Age 10 Gr 1 FR-FU 1963	-.289	-.308	-.115	-.296	.351*	-.352	.279*	-.290	....	....	-.598	-.683	-.459	....	.476*	.628*
365	Age 12 Gr 3+ FR 1963	-.172	.199	.279	.315	-.392*	.316	-.448*	.306	....	....	.663	.905	.627	....	-.650*	-.908*
Pass rates																	
376	Pass 2/Pres U 1960	.267	.307	.279	.388	-.337*	.337	-.365*	.378	....	....	.293	.304	.434	....	-.486*	-.394*
377	Pass 2/Pres R 1960	.296	.351	.072	.339	-.415*	.387	-.284*	.359	....	....	.337	.269	.516	....	-.541*	-.388*
School facilities																	
387	Pri. Teachers/EnAct 1940	.489	.552	.564	.625	-.635*	.620	-.689*	.623	....	....	.593	.652	.629	....	-.670*	-.628*
388	Pri. Teachers/EnAct 1960	.386	.419	.470	.496	-.515*	.520	-.535*	.504	....	....	.661	.724	.577	....	-.536*	-.667*
389	Sch Incomplete U 1942	-.063	-.065	.094	-.128	.217*	-.134	.068*	-.113	....	....	-.218	-.237	-.342	.....	.342*	.264*
390	Sch Incomplete R 1942*	.036*	.030*	-.040*	.132*	-.241**	.118*	-.131**	.108*	....	....	.307*	.382*	.406*	.....	-.401**	-.410**
395	Sch Incomplete T 1960	-.218	-.214	-.126	-.313	.500	-.362	.356*	-.334	....	....	-.581	.582	-.690	.....	.626*	.606*
396	Sch Incomplete U 1942-60	.019	.004	.042	-.038	.023*	-.015	-.017*	-.009	....	....	.019	-.073	-.076	....	.065*	.023*
397	Sch Incomplete R 1942-60	.003	.010	.039	.031	-.024*	.067	-.047*	.076	....	....	.036	-.001	-.003	....	.005*	.020*

		Age Differences in Literacy 1960								Male-Female Differences in Literacy by Age 1960							
		Urban				Rural				Urban				Rural			
		Males		Females		Males		Females									
		(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	40-49	25-29	20-24	10-14	40-49	25-29	20-24	10-14
	Variable Number	198	199	200	201	202	203	204	205	208	210	211	213	218	220	221	223
	Adult levels of schooling																
	Low levels																
226	Adult 25 + 0 M 1950	....	....	....	....	....	....	....	....	.629	.564	....	.443	.506	.539	....	.383
227	Adult 25 + 0 F 1950	....	....	....	....	....	....	....	....	.711	.652	....	.544	.652	.619	....	.488
228	Adult 30 + 0 M 1960	.375	-.349	.706	....	.706	.218	.218	....	.615	.607	.523	.447	.490	.530	.544	.387
229	Adult 30 + 0 F 1960	.317	-.317	....	....	.823	.405	....	....	.847	.818	.694	.641	.747	.755	.765	.643
	High levels																
236	Adult 25+7+M 1950	-.322	....	-.663	....	.296	....	-.274	....	-.586	-.556	-.522	-.408	-.492	-.445	-.466	-.354
237	Adult 25+7+F 1950	-.356	.192	....	....	-.751	-.391	....	....	-.682	-.642	-.586	-.499	-.607	-.585	-.599	-.474
238	Adult 30+7+M 1960	-.293	.313	-.645	.308	-.645	-.296	-.296	.548	-.533	-.565	-.526	-.450	-.514	-.494	-.520	-.323
239	Adult 30+7+F 1960	-.281	.201	-.706	.344	-.706	-.363	-.363	.573	-.671	-.637	-.596	-.511	-.583	-.606	-.623	-.441
240	Adult 25+10+M 1950	....	....	....	....	....	....	....	....	-.565	-.491	....	-.392	-.470	-.435	....	-.325
241	Adult 25+10+F 1950	....	....	....	....	....	....	....	....	-.550	-.490	....	-.410	-.479	-.478	....	-.325
242	Adult 30+10+M 1960	-.222	.288	-.623	....	-.623	-.312	-.312	....	-.589	-.534	-.522	-.438	-.516	-.495	-.511	-.316
243	Adult 30+10+F 1960	-.195	.176	....	....	-.656	-.365	....	....	-.653	-.573	-.569	-.492	-.551	-.593	-.592	-.397
248	Adult 15+Bac M 1940	....	....	....	....	....	....	....	....	-.336	-.292	....	-.262	-.196	-.194	....	-.203
249	Adult 15+Bac F 1940	....	....	....	....	....	....	....	....	-.285	-.295	....	-.335	-.218	-.335	....	-.242
250	Adult 15+Un M 1940	....	....	....	....	....	....	....	....	-.456	-.452	....	-.347	-.380	-.343	....	-.258
251	Adult 15+Un F 1940	....	....	....	....	....	....	....	....	-.599	-.611	....	-.535	-.564	-.548	....	-.414
	Enrollment																
267	Enrol 6-14 M 1930	-.055	-.275	-.396	.032	.404	.191	.139	.413	....	....	....	....	....	....	....	....
265	Enrol 6-14 T 1937	-.179	-.304	-.391	.299	.712	.152	.049	.349	-.460	-.576	-.714	-.616	-.419	-.465	-.503	.340
266	Enrol 6-14 T 1960*	-.000*	.254*	.239*	-.055*	-.537*	-.075*	-.327*	-.264*	.370*	.438*	.629*	.418*	.127*	-.276*	.339*	.311*
273	Enrol 6-14 Urban 1960	-.259	-.220	-.436	.121	.105	-.171	-.205	.053	-.335	-.356	-.437	-.315	-.291	-.214	-.393	-.175
274	Enrol 6-14 Rural 1960	.211	-.021	.142	-.071	.536	.004	.571	.027	-.048	-.081	-.330	-.163	.161	-.029	-.031	-.136
275	Enrol 6-14 U-R 1960	-.325	-.093	-.400	.066	-.293	-.128	-.499	.027	-.191	-.203	-.077	-.075	-.290	-.114	-.246	-.037

7

		Age Differences in Literacy 1960								Male-Female Differences in Literacy by Age 1960							
		Urban				Rural				Urban				Rural			
		Males		Females		Males		Females									
		(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	40-49	25-29	20-24	10-14	40-49	25-29	20-24	10-14
	Variable Number	198	199	200	201	202	203	204	205	208	210	211	213	218	220	221	223
	Enrol and income in pesos monthly 1959																
278	Enrol 6/Inc $200	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
280	Enrol 6/$601 to $1,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
282	Enrol 6/601-1,000)-(200)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Enrol and occupation of father 1959																
283	Enrol 6/Agriculture	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
284	Enrol 6/Professional	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
285	Enrol 6/Prof-Ag	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Progress in school																
	Continuation rates--primary school																
	Beginning of year enrollment																
288	B 4/3 Urban 1942	....	....	....	....	....	.....	....	....	....	....	.108	....	....	....	-.267	....
293	B 4/3 Rural 1942	-.027	.116	-.302	....	-.116	-.136	-.136	....	-.257	-.172	-.193	-.001	-.171	-.200	-.254	-.016
296	B 4/3 Urban-Rural 1942	.109	.268	.352	.012	-.169	-.057	.226	-.109	.263	.156	.256	.088	.185	.065	.099	.005
299	B 4/3 Urban 1960*	-.409*	-.169*	-.249*	.398*	-.026*	.115*	-.255*	.182*	....	....	-.143*	....	....	....	-.030*	....
304	B 4/3 Rural 1960	.449	.398	.101	....	.398	.218	.218	....	-.031	-.020	-.066	.128	.020	-.054	.047	.021
307	B 4/3 Urban-Rural 1960	-.281	-.402	....	....	.016	-.147	....	....	.122	.079	.108	-.002	.046	.033	-.084	.032
308	B 4/3 Urban 1960-1942	.268	-.061	.201	-.143	.141	-.310	.110	-.467	.122	....	-.052	....	.124	....	.225	....
309	B 4/3 Rural 1960-1942	.489	-.083	.395	-.427	.238	-.309	.375	-.205	.185	....	.085	....	.185	....	.288	....
330	B 5/1 Urban 1942	-.245	.170	....	....	-.405	-.151	....	....	-.253	-.305	-.227	-.146	-.257	-.359	-.373	-.115
331	B 5/1 Rural 1942	.324	.035	....	....	-.144	-.140	....	....	-.253	-.189	-.213	-.074	-.234	-.466	-.394	-.158
332	B 5/1 Urban 1960*	-.028*	-.436*	....	....	.150*	-.098*	....	....	.150*	.227*	.273*	[illegible]*	.144*	.164*	.201*	.090*
333	B 5/1 Rural 1960	.085	.296	....	....	-.312	-.069	....	....	-.370	-.299	-.364	-.251	-.323	-.424	-.339	-.300
	Secondary school																
338	Cont. 3/1 M 1960	-.356	-.016	-.221	....	-.221	-.044	-.044	....	-.037	-.070	-.141	-.020	-.026	.039	-.138	.001
339	Cont. 3/1 F 1960	-.403	-.249	....	....	-.406	-.249	....	....	-.223	-.176	-.137	.019	-.134	-.122	-.245	-.106

		Age Differences in Literacy 1960								Male-Female Differences in Literacy by Age 1960							
		Urban				Rural				Urban				Rural			
		Males		Females		Males		Females									
		(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	40-49	25-29	20-24	10-14	40-49	25-29	20-24	10-14
	Variable Number	198	199	200	201	202	203	204	205	208	210	211	213	218	220	221	223
Age grade progress in school																	
347	Age 10 Gr 1 MU 1963	.190	-.339	....	....	.562	.129	....	....	.552	.619	.635	.416	.520	.530	.642	.501
348	Age 10 Gr 1 MR 1963	.252	-.084	.452	-.184	-.338	-.220	-.043	-.486	.429	.434	.536	.329	.276	.386	.441	.348
349	Age 10 Gr 1 MR-MU 1963	.191	.018	.452	-.213	-.399	-.315	.070	-.527	.465	.465	.416	.288	.320	.343	.341	.290
353	Age 12 Gr 3+ MR 1963	.105	.390	....	....	-.237	.138	....	....	-.299	-.347	-.389	-.159	-.213	-.362	-.347	-.277
359	Age 10 Gr 1 FU 1963	.332	-.447	....	....	.545	-.006	....	....	.513	.657	.709	.515	.464	.506	.581	.492
360	Age 10 Gr 1 FR 1963	.233	.073	.548	-.252	-.459	-.311	.034	-.604	.581	.621	.634	.445	.423	.466	.505	.443
361	Age 10 Gr 1 FR-FU 1963	.226	.031	.269	-.158	-.264	-.156	-.120	-.335	.239	.213	.321	.189	.069	.183	.216	.152
365	Age 12 Gr 3+ FR 1963	.112	.394	....	....	-.280	.101	....	....	-.346	-.385	-.428	-.190	-.248	-.391	-.380	-.293
Pass rates																	
376	Pass 2/Pres U 1960	.035	.025	....	....	-.291	-.156	....	....	-.360	-.262	-.374	-.240	-.406	-.574	-.548	-.342
377	Pass 2/Pres R 1960	-.147	-.271	-.446	....	-.446	-.340	-.340	....	-.474	-.341	-.324	-.338	-.491	-.613	-.641	-.536
School facilities																	
387	Pri. Teachers/EcAct 1940	-.105	....	-.526	....	.404	....	-.226	....	-.559	-.527	-.628	-.447	-.458	-.466	-.542	-.318
388	Pri. Teachers/EcAct 1960	-.154	....	-.422	....	.409	....	.079	....	-.473	-.492	-.586	-.397	-.226	-.299	-.434	-.379
389	Sch Incomplete U 1942	-.025	-.022	.257	-.013	.257	.287	.287	-.232	-.239	.130	.048	-.027	.331	.367	.332	.155
390	Sch Incomplete R 1942*	.077*	.042*	-.246*	-.139*	-.246*	-.232*	-.232*	.239*	-.274*	-.125*	-.159*	.011*	-.282*	-.303*	-.274*	-.177*
395	Sch Incomplete T 1960	-.073	-.132	....	....	.503	.265	....	....	.594	.429	.429	.306	.506	.516	.429	.479
396	Sch Incomplete U 1942-60	-.052	-.044	.051	.090	.051	.168	.168	-.112	.070	.010	-.085	-.102	.085	.102	.082	-.116
397	Sch Incomplete R 1942-60	.100	.214	.011	-.030	.011	.198	.198	.050	-.136	-.234	-.192	-.227	-.065	-.001	-.010	-.257

		Adult Levels of Education															
		No Schooling				7+ Years Schooling				10+ Years Schooling				Bac		Univ	
		1950		1960		1950		1960		1950		1960		1940			
		Age 25+		Age 30+		Age 25+		Age 30+		Age 25+		Age 30+		Age 15+			
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	Variable Number	226	227	228	229	236	237	238	239	240	241	242	243	248	249	250	251
Enrollment																	
267	Enrol 6-14 M 1930	....	....	....	....	....	....	.597	.553	....	....	....	....	....	....	....	....
265	Enrol 6-14 T 1937	-.715	-.633	-.714	-.687	.659	.589	.680	.610	.619	.515	.656	.566	.193	.076	.400	.530
266	Enrol 6-14 T 1960*	.604*	.462*	.638*	.576*	-.585*	-.447*	-.570*	-.491*	-.573*	-.381*	-.565*	-.477*	-.260*	-.136*	-.336*	-.352*
273	Enrol 6-14 Urban 1960	....	....	-.205	-.259	.182	.208	.244	.248	....	....	.239	.206	....	....	....	.....
274	Enrol 6-14 Rural 1960	....	....	-.403	-.264	.232	.139	.238	.189	....	....	.233	.207	....	....	....	.....
275	Enrol 6-14 U-R 1960	....	....	.117	-.001	-.066	.042	-.001	.035	....	....	-.003	-.011	....	....	....	.....
	Enrol and income in pesos monthly 1959																
278	Enrol 6/Inc $200	....	....	....	....	....	....	....	....	....	....	.....	....	....	....	....	.....
280	Enrol 6/$601 to $1,000	....	....	....	....	....	....	....	....	....	....	.....	....	....	....	....	.....
282	Enrol 6/(601-1,000)-(200)	....	....	....	....	....	....	....	....	....	....	.....	....	....	....	....	.....
	Enrol and occupation of father 1959																
283	Enrol 6/Agriculture	....	....	....	....	....	....	....	....	....	....	.....	....	....	....	....	.....
284	Enrol 6/Professional	....	....	....	....	....	....	....	....	....	....	.....	....	....	....	....	.....
285	Enrol 6/Prof-Ag	....	....	....	....	....	....	....	....	....	....	.....	....	....	....	....	.....
Progress in school																	
Continuation rates--primary school																	
	Beginning of year enrollment																
288	B 4/3 Urban 1942	....	....	....	....	....	....	....	....	....	....	.....	....	....	....	....	.....
293	B 4/3 Rural 1942	....	....	-.481	-.367	.402	.353	.384	.409	....	....	.375	.404	....	....	....	.....
296	B 4/3 Urban-Rural 1942	....	....	.421	.326	-.451	-.320	-.358	-.303	....	....	-.367	-.293	....	....	....	.....
299	B 4/3 Urban 1960*	....	....	....	....	....	....	.157*	.166*	....	....	.....	....	....	....	....	.....
304	B 4/3 Rural 1960	....	....	-.239	-.134	.126	.032	.072	.064	....	....	.070	.071	....	....	....	.....
307	B 4/3 Urban-Rural 1960	....	....	.264	.202	-.193	-.116	-.120	-.108	....	....	-.120	-.109	....	....	....	.....
308	4/3 Urban 1960-1942	....	....	.183	....	-.099	....	-.202	-.255	....	....	-.175	....	....	....	....	.....
309	4/3 Rural 1960-1942	....	....	.231	....	-.264	....	-.313	-.329	....	....	-.303	....	....	....	....	.....
330	B 5/1 Urban 1942	....	....	-.658	-.551	.636	.633	.685	.696	....	....	.647	.682	....	....	....	......
331	B 5/1 Rural 1942	.....	....	-.394	-.342	.299	.346	.359	.465	....	....	.362	.508	....	....	....	.....

		Adult Levels of Education													
		No Schooling				7+ Years Schooling				10+ Years Schooling				Bac		Univ	
		1950		1960		1950		1960		1950		1960		1940			
		Age 25+		Age 30+		Age 25+		Age 30+		Age 25+		Age 30+		Age 15+			
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	Variable Number	226	227	228	229	236	237	238	239	240	241	242	243	248	249	250	251
332	B 5/1 Urban 1960*	....	....	.508*	.397*	-.521*	-.414*	-.506*	-.470*	....	....	-.477*	-.444*	....	....	....	....
333	B 5/1 Rural 1960	....	....	-.646	-.557	.531	.524	.493	.540	....	....	.482	.533	....	....	....	....
Secondary school																	
338	Cont. 3/1 M 1960	....	....	-.132	-.100	.104	.041	.101	.060	....	....	.113	.058	....	....	....	....
339	Cont. 3/1 F 1960	....	....	-.252	-.249	.239	.246	.228	.259	....	....	.236	.264	....	....	....	....
Age grade progress in school																	
347	Age 10 Gr 1 MU 1963	.678	.628	.721	.734	-.663	-.679	-.694	-.733	-.630	-.584	-.676	-.699	-.301	-.260	-.506	-.621
348	Age 10 Gr 1 MR 1963	.783	.596	.796	.698	-.650	-.624	-.634	-.654	-.596	-.521	-.605	-.617	-.151	-.033	-.435	-.459
349	Age 10 Gr 1 MR-MU 1963	....	....	.808	.733	-.655	-.627	-.602	-.617	....	....	-.572	-.598	....	....	....	....
353	Age 12 Gr 3+ MR 1963	....	....	-.687	-.569	.518	.506	.510	.553	....	....	.483	.528	....	....	....	....
359	Age 10 Gr 1 FU 1963	.687	.603	.740	.743	-.704	-.676	-.700	-.694	-.648	-.555	-.667	-.627	-.347	-.214	-.583	-.664
360	Age 10 Gr 1 FR 1963	.838	.673	.868	.832	-.737	-.705	-.699	-.718	-.676	-.609	-.669	-.684	-.369	-.195	-.583	-.641
361	Age 10 Gr 1 FR-FU 1963	....	....	.642	.501	-.465	-.434	-.440	-.442	....	....	-.410	-.412	....	....	....	....
365	Age 12 Gr 3+ FR 1963	....	....	-.702	-.593	.544	.521	.530	.564	....	....	.506	.535	....	....	....	....
Pass rates																	
376	Pass 2/Pres U 1960	.....	....	-.338	-.401	.276	.369	.369	.443	....	....	.404	.434	....	....	....	....
377	Pass 2/Pres R 1960	.....	....	-.343	-.437	.200	.381	.268	.418	....	....	.281	.423	....	....	....	....
School facilities																	
387	Pri. Teachers/EcAct 1940	....	....	-.701	-.681	.675	.594	.684	.622	....	....	.694	.629	....	....	....	....
388	Pri. Teachers/EcAct 1960	....	....	-.658	-.625	.570	.467	.557	.485	....	....	.341	.457	....	....	....	....
389	Sch Incomplete U 1942	....	....	.203	.215	-.070	-.075	-.079	-.115	....	....	-.088	-.122	....	....	....	....
390	Sch Incomplete R 1942*	....	....	-.331*	-.298*	.249*	.291*	.230*	.333*	....	....	.229*	.344*	....	....	....	....
395	Sch Incomplete T 1960	....	....	.610	.646	-.570	-.593	-.515	-.571	....	....	-.519	-.561	....	....	....	....
396	Sch Incomplete U 1942-60	....	....	.033	.035	-.008	.030	-.043	-.065	....	....	-.038	-.078	....	....	....	....
397	Sch Incomplete R 1942-60	....	....	.058	-.065	-.012	-.028	-.041	-.032	....	....	-.048	-.120	....	....	....	....

		Enrollment										
		Age 6-14		Age 6-10	Age 6-14			Enrollment at 6 Years 1959				
		1937	1960*	1930	1960			Income in Pesos Monthly			Occupation	
		Total		Males	Urban	Rural	Urban-Rural	200	601 to 1000	(601 to 1000)-200	Ag	Prof
	Variable Number	265	266	267	273	274	275	278	280	282	283	284
	Progress in school											
	Continuation rates--primary school											
	Beginning of year enrollment											
288	B 4/3 Urban 1942	-.043	-.015*	....	....	.....	....	....	....	....	....	....
293	B 4/3 Rural 1942	.413	-.353*	.428	.227	.211	.036	-.008	.258	-.033	.370	-.003
296	B 5/3 Urban-Rural 1942	-.498	.334*	-.501	-.232	-.241	-.010	-.179	-.199	.147	-.281	-.213
299	B 4/3 Urban 1960*	-.075*	.218**	-.129*	.034*	-.451*	-.268*	....	....	....	....	....
304	B 4/3 Rural 1960	.290	-.250*	.452	-.134	.420	-.353	-.175	-.111	.054	-.030	-.021
307	B 4/3 Urban-Rural 1960	-.248	.193*	-.488	.141	-.280	.276	.251	.123	-.122	.057	-.073
308	4/3 Urban 1960-1942	.106	-.075*	.091	-.031	.337	-.239	....	....	....	....	....
309	4/3 Rural 1960-1942	-.132	.064*	.059	-.327	.244	-.387	....	....	....	....	....
330	B 5/1 Urban 1942	.474	-.404*	.345	.123	.182	-.030	-.010	.225	-.177	.365	-.017
331	B 5/1 Rural 1942	.293	-.249*	.262	-.014	.271	-.182	.040	-.064	-.200	.093	-.159
332	B 5/1 Urban 1960*	-.571*	.463**	.545*	-.032*	-.537*	.323*	.001*	-.070*	-.268*	.072*	.065*
333	B 5/1 Rural 1960	.544	-.363*	-.470	.014	.474	-.284	-.093	-.237	.146	-.303	-.006
	Secondary school											
338	Cont. 3/1 M 1960	.218	-.219*	.114	.376	.160	.164	.430	.314	-.266	.514	.150
339	Cont. 3/1 F 1960	.057	-.073*	.205	.230	-.069	.209	.461	.256	-.340	.471	.115
	Age grade progress in school											
347	Age 10 Gr 1 MU 1963	-.667	.536*	-.469	-.374	-.362	-.030	.084	-.215	.198	-.367	-.097
348	Age 10 Gr 1 MR 1963	-.682	.674*	-.712	-.271	-.450	.088	.009	-.270	.174	-.333	-.167
349	Age 10 Gr 1 MR-MU 1963	-.574	.561*	-.718	.039	-.470	.329	-.153	-.231	.279	-.405	-.349
353	Age 12 Gr 3+ MR 1963	.596	-.561*	.608	.082	.590	-.302	-.064	-.014	-.239	.156	.001

		Enrollment										
		Age 6-14		Age 6-10	Age 6-14			Enrollment at 6 Years 1959				
		1937	1960*	1930	1960			Income in Pesos Monthly			Occupation	
		Total		Males	Urban	Rural	Urban-Rural	200	601 to 1000	(601 to 1000)-200	Ag	Prof
	Variable Number	265	266	267	273	274	275	273	280	282	283	284
359	Age 10 Gr 1 FU 1963	-.774	.689*	-.521	-.357	-.420	.025	.148	-.303	.128	-.397	-.163
360	Age 10 Gr 1 FR 1963	-.718	.717*	-.746	-.172	-.537	.225	-.029	-.272	.225	-.440	-.279
361	Age 10 Gr 1 FR-FU 1963	-.519	.532*	-.646	-.140	-.362	.121	-.031	-.213	.135	-.222	-.157
365	Age 12 Gr 3+ FR 1963	.644	-.595*	.645	.122	.593	-.277	-.072	-.035	-.233	.194	.033
Pass rates												
376	Pass 2/Pres U 1960	.249	-.099*	.069	.058	.129	-.059	.030	-.053	-.239	.060	.011
377	Pass 2/Pres R 1960	.081	-.006*	.008	.210	-.043	.177	-.020	-.053	-.141	.148	-.029
School facilities												
387	Pri. Teachers/EcAct 1940	.795	-.731*	.606	.472	.462	.026	.241	.398	-.209	.545	.260
388	Pri. Teachers/Ecact 1960	.673	-.879*	.638	.536	.576	.023	-.052	.305	-.031	.421	.162
389	Sch Incomplete U 1942	-.113	-.017*	-.031	-.066	.032	-.080	-.290	-.401	.118	-.491	-.324
390	Sch Incomplete R 1942*	.237*	-.022**	.276*	-.036*	.084*	-.067*	.148*	.188*	-.069*	.255*	.157*
395	Sch Incomplete T 1960	-.365	.257*	-.582	.003	-.179	.107	.200	.085	.073	-.101	-.151
396	Sch Incomplete U 1942-60	.104	.033*	.042	-.025	.035	-.049	-.208	-.202	.058	-.231	.027
397	Sch Incomplete R 1942-60	-.032	-.137*	.095	.095	.113	-.011	-.405	-.200	.249	-.247	-.098

		Progress in School Continuation Rates													
		Primary School												Secondary School	
		Grades 4/3						Grades 5/1						Grade 3/1	
		1942			1960			1960-1942		1942		1960		1960	
		Urban	Rural	Urban-Rural	Urban*	Rural	Urban-Rural	Urban	Rural	Urban	Rural	Urban*	Rural	M	F
	Variable Number	288	293	296	299	304	307	308	309	330	331	332	333	338	339
	Age grade progress in school														
347	Age 10 Gr 1 MU 1963	....	-.457	.285	....	-.254	.139	....	....	-.735	-.478	.701*	-.537	-.234	-.226
348	Age 10 Gr 1 MR 1963	....	-.654	.504	.249*	-.324	.260	.135	.273	-.649	-.503	.593*	-.648	-.153	-.330
349	Age 10 Gr 1 MR-MU 1963	....	-.556	.475	.160*	-.375	.363	.097	.139	-.548	-.398	.598*	-.617	-.034	-.215
353	Age 12 Gr 3+ MR 1963	....	.600	-.424	....	.682	-.537	....	....	.565	.681	-.685*	.875	-.072	-.068
359	Age 10 Gr 1 FU 1963	....	-.420	.305	....	-.194	.186	....	....	-.642	-.256	.635*	-.424	-.254	-.200
360	Age 10 Gr 1 FR 1963	....	-.566	.450	.120*	-.364	.360	.124	.137	-.680	-.392	.666*	-.618	-.137	-.242
361	Age 10 Gr 1 FR-FU 1963	....	-.573	.469	.242*	-.272	.223	.104	.257	-.422	-.383	.346*	-.538	-.044	-.277
365	Age 12 Gr 3+ F 1963	....	.642	-.484	....	.683	-.524	....	....	.562	.678	-.700*	.886	-.062	-.038
	Pass rates														
376	Pass 2/Pres U 1960	....	.019	.177	....	-.025	.112	....	....	.297	.410	-.293*	.328	.130	.324
377	Pass 2/Pres R 1960	....	.053	.149	....	-.221	.275	-.239	-.256	.177	.359	-.021*	.315	.044	.334
	School facilities														
387	Pri. Teachers/Adult 1940	....	.503	-.622	....	.158	-.057	....	....	.501	.385	-.484*	.475	.378	.300
388	Pri. Teachers/Adult 1960	....	.352	-.370	....	.155	-.131		....	.357	.136	-.334*	.322	.321	.113
389	Sch Incomplete U 1942	....	-.513	.292	.353*	-.228	.080	.108	.236	-.412	-.442	.294*	-.263	-.103	-.110
390	Sch Incomplete R 1942*	....	.793*	-.572*	-.376**	.601*	-.492*	-.104*	-.114*	.500*	.695*	-.522**	.659*	-.073*	.032*
395	Sch Incomplete T 1960	....	-.399	.384	....	-.623	.707	....	....	-.254	-.426	.316*	-.777	.323	.107
396	Sch Incomplete U 1942-60	....	-.405	.125	.259*	-.091	-.030	.180	.237	-.402	-.443	.251*	.022	.030	.006
397	Sch Incomplete R 1942-60	....	-.384	.458	.364*	-.056	-.128	.100	.542	-.463	-.547	.221*	-.251	-.247	-.253

TABLE 62

CORRELATION MATRIX: EDUCATION VARIABLES AGAINST THEMSELVES, LITERACY RATES, PRIMARY SCHOOL CONTINUATION RATES, AND ADULT LEVELS OF SCHOOLING, SECONDARY SCHOOLING, PRIMARY SCHOOL ENROLLMENTS SELECTED VARIABLES SHOWING SCHOOL RETENTION

		Literacy Rates by Age, Sex and Year																
		Literacy 10+ Yrs		Literacy 40+ Yrs				Literacy 6+0 School	Literacy of Youth 10-14 Yrs						Changes in Literacy of Youth 10-14 Yrs			
		T	T	M	F	M	F	M	M	F*	M	F	M	F	M	F	M*	F*
		1940	1960	1940		1960		1940	1930		1940		1960		1940-1930		1960-1940*	
	Variable Number	140	141	145	146	147	148	153	155	156	157	158	159	160	161	162	163	164
Literacy rates by age, sex, and year																		
139	Literacy 10+ T 1930	.990	.934	.954	.966	.946	.937	-.411	.899	-.953*	.958	.965	.913	.915		....	....	....
140	Literacy 10+ T 1940	1.000	.960	.963	.971	.959	.951	-.392	.912	-.942*	.968	.983	.947	.953	.687	.616	.663*	.764*
141	Literacy 10+ T 1960	.960	1.000	.911	.929	.974	.962	-.289	.876	-.864*	.917	.940	.965	.982	.677	.591	.508*	.607*
142	Literacy 6+ T 1940	.999	.955	.961	.970	.956	.948	-.398	.912	-.944*	.971	.986	.946	.950	....	....	....	....
143	Literacy 6+ T 1950	.981	.989	.942	.945	.978	.956	-.323	.916	-.903*	.948	.961	.964	.974	....	....	....	....
144	Literacy 6+ T 1960	.961	.998	.916	.923	.978	.954	-.300	.887	-.868*	.927	.945	.970	.985	....	....	....	....
145	Literacy 40+ M 1940	.963	.911	1.000	.917	.949	.868	-.404	.920	-.912*	.939	.925	.936	.921	....	....	....	....
146	Literacy 40+ F 1940	.971	.929	.917	1.000	.909	.973	-.428	.819	-.915*	.892	.942	.890	.908	....	....	....	....
147	Literacy 40+ M 1960	.959	.974	.949	.909	1.000	.923	-.381	.914	-.885*	.934	.925	.955	.954	....	....	....	....
148	Literacy 40+ F 1960	.951	.962	.868	.973	.923	1.000	-.377	.803	-.875*	.867	.924	.893	.926	....	....	....	....
149	Literacy 30+ M 1930	.961	.899	.988	.913	.942	.860	-.408	.905	-.928*	.945	.925	.912	.898	....	....	....	....
150	Literacy 30+ F 1930	.960	.906	.898	.985	.891	.951	-.413	.804	-.921*	.896	.935	.861	.874	....	....	....	....
151	Literacy 30+ M 1960	.877	.903	.869	.814	.913	.825	-.335	.852	-.810*	.868	.856	.895	.898	....	....	....	....
152	Literacy 30+ F 1960	.894	.926	.808	.918	.884	.963	-.335	.756	-.819*	.801	.863	.837	.881	....	....	....	....
153	Literacy 6+0 Sch M 1940	-.392	-.289	-.404	-.428	-.381	-.377	1.000	-.258	.435*	-.315	-.340	-.237	-.254	-.109	.096	.337*	.396*
154	Literacy 6+0 Sch F 1940*	.436*	.340*	.440*	.490*	.416*	.438*	-.914*	.303*	-.447	.356*	.392*	.304*	.319*	....	....	....	....
Literacy of youth																		
155	Literacy 10-14 M 1930	.912	.876	.920	.819	.914	.803	-.288	1.000	-.895*	.938	.897	.915	.900	.448	.420	-.647*	.638*
156	Literacy 10-14 F 1930*	-.942*	-.864*	-.912*	-.915*	-.885*	-.875*	.435*	-.895*	1.000	-.929*	-.923	-.846*	-.856*	-.552	-.445	-.741**	-.774**
157	Literacy 10-14 M 1940	.968	.917	.939	.892	.934	.867	-.315	.938	-.929*	1.000	.979	.935	.924	.714	.663	.767*	.801*
158	Literacy 10-14 F 1940	.983	.940	.925	.942	.925	.924	-.340	.897	-.923*	.979	1.000	.935	.946	.755	.703	.717*	.821*
159	Literacy 10-14 M 1960	.947	.965	.936	.890	.955	.893	-.237	.915	-.846*	.935	.935	1.000	.984	.664	.594	.490*	.591*
160	Literacy 10-14 F 1960	.953	.982	.921	.908	.954	.926	-.254	.900	-.856*	.924	.946	.984	1.000	.666	.592	.494*	.593*

		Literacy Rates by Age, Sex, and Year																	
		Literacy 10+ Yrs		Literacy 40+ Yrs				Literacy 6+0 School	Literacy of Youth 10-14 Yrs						Changes in Literacy of Youth 10-14 Yrs			
		T	T	M	F	M	F	M	M	F*	M	F	M	F	M	F	M	F
		1940	1960	1940		1960		1940	1930		1940		1960		1940-1930		1960-1940*	
	Variable Number	140	141	145	146	147	148	153	155	156	157	158	159	160	161	162	163	164
	Changes in literacy of youth																	
161	Literacy 10-14 M 1940-30	.687	.677	....	....	....	....	-.109	.448	-.552	.714	.755	.664	.666	1.000	.937	.562*	.714*
162	Literacy 10-14 F 1940-30	.616	.591	....	....	....	....	.096	.420	-.445	.663	.703	.594	.592	.937	1.000	.574*	.725*
163	Literacy 10-14 M 1960-40*	.663*	.508*	....	....	....	....	-.337*	-.647*	-.741**	.767*	.717*	.490*	.494*	.562*	.574*	1.000**	.902**
164	Literacy 10-14 F. 1960-40*	.764*	.607*	....	....	....	....	-.396*	.638*	-.774**	.801*	.821*	.591*	.593*	.714*	.725*	.902**	1.000**
	Literacy by age 1960																	
	Urban males																	
167	50-59	.766	.744	.678	.758	.719	.753	-.418	.600	-.646*	.725	.782	.675	.701	....	....	....	....
168	40-49	.712	.714	.609	.707	.670	.722	-.398	.525	-.593*	.665	.729	.622	.662	.680	.742	.511*	.655*
169	30-39	.706	.722	.599	.715	.663	.734	-.362	.510	-.592*	.651	.727	.625	.673	.678	.728	.472*	.631*
170	25-29	.577	.537	.495	.570	.510	.531	-.327	.430	-.494*	.600	.636	.520	.525	.683	.748	.549*	.672*
172	15-19	.748	.744	.639	.773	.683	.774	-.379	.543	-.644*	.688	.767	.666	.703	....	....	....	....
173	10-14	.781	.774	.674	.803	.710	.804	-.396	.592	-.669*	.718	.801	.704	.753	.687	.726	.498*	.679*
	Urban females																	
175	50-59*	-.880*	-.861*	-.762*	-.914*	-.809*	-.930*	.374*	-.693*	.805**	-.797*	-.872*	-.768*	-.812*	....	....	....	....
176	40-49*	-.858*	-.862*	-.741*	-.888*	-.804*	-.918*	.396*	-.673*	.771**	-.769*	-.848*	-.761*	-.811*	-.653*	-.634*	-.515**	.686**
177	30-39	.829	.845	.708	.845	.768	.873	-.327	.633	-.709*	.755	.843	.753	.809	.721	.727	.496*	.680*
178	25-29*	-.793*	-.787*	-.678*	-.792*	-.732*	-.799*	.319*	-.627*	.696*	-.769*	-.827*	-.732*	-.764*	-.749*	-.763*	-.576**	-.722**
180	15-19	.768	.785	.659	.799	.702	.817	-.320	.557	-.650*	.682	.779	.700	.749	....	....	....	....
181	10-14	.780	.779	.671	.811	.695	.813	-.336	.580	-.671*	.707	.804	.710	.764	.694	.717	.459*	.666*
	Rural males																	
183	50-59*	-.821*	-.833	-.849*	-.760*	-.884*	-.771*	.274*	-.822*	.791**	-.810*	-.758*	-.828*	-.811*	....	....	....	....
184	40-49	.812	.886	.833	.728	.912	.777	-.176	.844	-.745*	.810	.761	.885	.872	....	....	....	....
185	30-39	.809	.894	.824	.725	.898	.774	-.118	.835	-.735*	.811	.770	.889	.883	....	....	....	....
186	25-29	.810	.891	.823	.729	.893	.782	-.128	.833	-.717*	.792	.758	.882	.873	.455	.368	.349*	.338*
188	15-19*	-.821*	-.861*	-.842*	-.728*	-.884*	-.751*	.174*	-.836*	.771**	-.841*	-.783*	-.888*	-.864*	....	....	....	....
189	10-14	.864	.899	.883	.763	.905	.777	-.127	.904	-.785*	.891	.853	.952	.936	.574	.504	.474*	.469*
	Rural females																	
191	50-59	.895	.909	.830	.923	.875	.952	-.299	.747	-.847*	.807	.847	.836	.865	....	....	....	....
192	40-49	.895	.943	.823	.904	.895	.957	-.267	.769	-.822*	.811	.854	.878	.908	.603	.461	.403*	.523*
193	30-39	.866	.937	.798	.853	.876	.910	-.153	.768	-.784*	.808	.839	.876	.905	....	....	....	....
194	25-29*	-.833*	-.909*	-.773*	-.827*	-.860*	-.892*	.199*	-.735*	.766**	-.764*	-.792*	-.845*	-.870*	-.549*	-.418*	-.348**	-.434**
196	15-19	.879	.946	.856	.839	.907	.879	-.137	.836	-.796*	.837	.846	.937	.951	....	....	....	....
197	10-14*	-.855*	-.891*	-.844*	-.774*	-.883*	-.800*	.191*	-.837*	.793**	-.864*	-.843*	-.914*	-.917*	-.607*	-.488*	-.476**	-.479**

		Literacy Rates						by Age, Sex, and Year										
		Literacy 10+ Yrs		Literacy 40+ Yrs				Literacy 6+0 School	Literacy of Youth 10-14 Yrs						Changes in Literacy of Youth 10-14 Yrs			
		T	T	M	F	M	F	M	M	F*	M	F	M	F	M	F	M	F
		1940	1960	1940		1960		1940	1930		1940		1960		1940-1930		1960-1940*	
	Variable Number	140	141	145	146	147	148	153	155	156	157	158	159	160	161	162	163	164
	Age differences in literacy 1960																	
	Urban males																	
198	(15-19)-(40-49)	-.319	-.331	-.275	-.242	-.351	-.284	.271	-.255	.211*	-.321	-.323	-.247	-.276	-.101	-.280	-.216*	.188*
199	(40-49)-(60+)	-.108	.012	-.118	-.151	.002	-.044	.114	-.166	.190*	-.121	-.147	-.054	-.037	.080	-.122	-.315*	.135*
	Urban females																	
200	(15-19)-(40-49)	-.757	-.756	-.644	-.802	-.723	-.849	.435	-.613	.694*	-.654	-.725	-.634	-.687	-.261	-.391	-.497*	-.520*
201	(40-49)-(60+)	.397	.483	.314	.385	.412	.456	-.180	.237	-.292*	.340	.396	.353	.400	-.234	-.212	-.265*	-.436*
	Rural males																	
202	(15-19)-(40-49)	.394	.335	.396	.320	.286	.253	.240	.430	-.333*	.471	.459	.471	.422	[illegible]	.159	.255*	.429*
203	(40-49)-(60+)	.491	.541	.397	.422	.536	.487	-.184	.461	-.471*	.525	.496	.482	.466	.283	.177	.226*	.543*
	Rural females																	
204	(15-19)-(40-49)	-.315	-.284	-.168	-.446	-.243	-.497	.419	-.062	.320*	-.183	-.283	-.118	-.167	.318	.296	.305*	.325*
205	(40-49)-(60+)	.740	.770	.654	.692	.749	.756	-.315	.670	-.649*	.703	.723	.734	.738	.265	.350	.513*	.351*
	Male-female differences in literacy by age 1960																	
	Urban males minus females																	
207	50-59	-.666	-.670	-.538	-.768	-.570	-.813	.163	-.487	.635*	-.526	-.639	-.573	-.641	....	....	....	....
208	40-49	-.761	-.776	-.649	-.850	-.685	-.891	.292	-.590	.693*	-.614	-.731	-.683	-.747	-.450	-.353	-.270*	-.509*
209	30-39	-.769	-.790	-.626	-.815	-.668	-.856	.091	-.590	.667*	-.677	-.783	-.723	-.785	....	....	....	....
210	25-29	-.707	-.748	-.551	-.759	-.618	-.816	.059	-.546	.605*	-.617	-.734	-.671	-.746	-.558	-.544	-.312*	-.523*
211	20-24	-.644	-.660	....	....	....	....	.096	-.545	.558*	-.547	-.649	-.626	-.702	-.405	-.377	-.221*	-.392*
212	15-19	-.590	-.655	-.516	-.627	-.541	-.684	.071	-.426	.470*	-.463	-.578	-.578	-.646	....	....	....	....
213	10-14	-.572	-.591	-.482	-.627	-.455	-.629	.020	-.381	.499*	-.479	-.602	-.544	-.604	-.536	-.492	-.187*	-.441*
214	40-49 FU/M 1960	.780*	.794*	.661*	.863*	.700*	.897*	-.339*	.578*	-.684*	.636*	.761*	.691*	.758*	....	....	....	....
215	15-19 FU/M 1960*	-.580*	-.640*	-.501*	-.627*	-.527*	-.677*	.117*	-.398*	.461**	-.451*	-.572*	-.554*	-.624*	....	....	....	....

	Literacy Rates by Age, Sex, and Year															
	Literacy 10+ Yrs		Literacy 40+ Yrs				Literacy 6+0 School	Literacy of Youth 10-14 Yrs						Changes in Literacy of Youth 10-14 Yrs			
	T	T	M	F	M	F	M	M	F*	M	F	M	F	M	F	M	F
	1940	1960	1940		1960		1940	1930		1940		1960		1940-1930		1960-1940*	
Variable Number	140	141	145	146	147	148	153	155	156	157	158	159	160	161	162	163	164
Rural males minus females																	
217 50-59	-.527	-.519	-.370	-.665	-.402	-.694	.219	-.247	.514*	-.384	-.516	-.381	-.457	....	....	....	....
218 40-49	-.646	-.644	-.488	-.766	-.524	-.802	.275	-.377	.595*	-.496	-.634	-.527	-.596	-.540	-.413	-.262*	-.537*
219 30-39	-.603	-.624	-.438	-.703	-.489	-.750	.145	-.358	.544*	-.479	-.606	-.503	-.574	....	....	....	....
220 25-29	-.633	-.690	-.497	-.729	-.560	-.784	.126	.425	.602*	-.513	-.631	-.589	-.662	-.520	-.348	-.195*	-.410*
221 20-24	-.637	-.712	....	....	....	....	.160	-.426	.550*	-.510	-.637	-.599	-.685	-.532	-.416	-.177*	-.392*
222 15-19	-.553	-.628	-.446	-.652	-.498	-.708	.118	-.363	.504*	-.409	-.538	-.527	-.620	....	....	....	....
223 10-14	-.534	-.598	-.439	-.612	-.471	-.672	.135	-.368	.468*	-.385	-.515	-.511	-.607	-.324	-.176	-.023*	-.220*
224 40-49 FR/M	.808	.847	.697	.865	.754	.922	-.269	.616	-.724*	.679	.779	.754	.817	....	....	....	....
225 15-19 FR/M*	-.610*	-.689*	-.517*	-.683*	-.570*	-.743*	.119*	-.446*	.543**	-.469*	-.585*	-.597*	-.686*	....	....	....	....
265 Enrol 6-14 T 1937	.748	.698	.728	.695	.650	.631	-.055	.703	-.702*	.775	.787	.737	.743	.627	.638	.582*	.656*
266 Enrol 6-14 T 1960*	-.640*	-.637*	-.663*	-.556*	-.625*	-.513*	-.028*	-.725*	.569**	-.697*	-.675*	-.725*	-.719*	-.413*	-.442*	-.416**	-.419**

		Urban Literacy by Age 1960						Rural Literacy by Age 1960									
		Males				Females				Males				Females			
		40-49	30-39	25-29	10-14	40-49*	30-39	25-29*	10-14	40-49	30-39	25-29	10-14	40-49	30-39	25-29*	10-14*
	Variable Number	168	169	170	173	176	177	178	181	184	185	186	189	192	193	194	197
Literacy by age 1960																	
	Urban males																
167	50-59	.978	.967	.702	.928	-.889*	.936	-.838*	.915	.487	.518	.537	.541	.627	.611	-.613*	-.527*
168	40-49	1.000	.983	.686	.923	-.891*	.943	-.831*	.913	.463	.497	.514	.497	.620	.600	-.600*	-.502*
169	30-39	.983	1.000	.680	.941	-.891*	.954	-.831*	.943	.457	.499	.510	.497	.630	.617	-.627*	-.498*
170	25-29	.686	.680	1.000	.698	-.625*	.660	-.891*	.669	.298	.332	.271	.403	.415	.410	-.355*	-.419*
172	15-19	.955	.973	.734	.966	-.900*	.951	-.868*	.965	.456	.490	.495	.514	.661	.629	-.630*	-.515*
173	10-14	.923	.941	.698	1.000	-.915*	.955	-.870*	.987	.496	.531	.530	.565	.700	.666	-.673*	-.575*
	Urban females																
175	50-59*	-.866*	-.867*	-.620*	-.906*	.987**	-.952*	.872**	-.905*	-.612*	-.627*	-.640*	-.633*	-.853*	-.797*	.799**	.657**
176	40-49*	-.891*	-.891*	-.625*	-.915*	1.000**	-.962*	.880**	-.911*	-.633*	-.653*	-.666*	-.640*	-.864*	-.817*	.823*	.670*
177	30-39	.943	.954	.660	.955	-.962*	1.000	-.882*	.966	.570	.606	.623	.623	.790	.763	-.753*	-.639*
178	25-29*	-.831*	-.831*	-.891*	-.870*	.880*	-.882*	1.000**	-.853*	-.549*	-.584*	-.552*	-.627*	-.725*	-.711*	.684**	.668**
180	15-19	.921	.952	.674	.938	-.911*	.967	-.845*	.962	.485	.520	.541	.548	.720	.682	-.681*	-.545*
181	10-14	.913	.943	.669	.987	-.911*	.966	-.853*	1.000	.476	.518	.521	.560	.707	.677	-.677*	-.570*
	Rural males																
183	50-59*	-.429*	-.426*	-.326*	-.468*	.636**	-.542*	.559**	-.441*	-.931*	-.905*	-.902*	-.869*	-.833*	-.810*	.843**	.856**
184	40-49	.463	.457	.298	.496	-.633*	.570	-.549*	.476	1.000	.985	.968	.931	.859	.874	-.873*	-.906*
185	30-39	.497	.499	.332	.531	-.653*	.606	-.584*	.518	.985	1.000	.980	.940	.853	.899	-.890*	-.913*
186	25-29	.514	.510	.271	.530	-.666*	.623	-.552*	.521	.968	.980	1.000	.922	.858	.893	-.894*	-.886*
188	15-19*	-.450*	-.438*	-.365*	-.486*	.612**	-.558*	.593**	-.467*	-.960*	-.955*	-.937*	-.953*	-.835*	-.859*	.858**	.959**
189	10-14	.497	.497	.403	.565	-.640*	.623	-.627*	.560	.931	.940	.922	1.000	.820	.853	-.828*	-.960*
	Rural females																
191	50-59	.629	.640	.441	.705	-.880*	.790	-.742*	.708	.808	.800	.804	.771	.973	.918	-.927*	-.805*
192	40-49	.620	.630	.415	.700	-.864*	.790	-.725*	.707	.859	.853	.858	.820	1.000	.966	-.963*	-.859*
193	30-39	.600	.617	.410	.666	-.817*	.763	-.711*	.677	.874	.899	.893	.853	.966	1.000	-.969*	-.888*
194	25-29*	-.600*	-.627*	-.355*	-.673*	.823**	-.753*	.684**	-.677*	-.873*	-.890*	-.894*	-.828*	-.963*	-.969*	1.000**	.865**
196	15-19	.526	.536	.374	.613	-.738*	.700	-.657*	.627	.926	.936	.927	.935	.939	.956	-.928*	-.944*
197	10-14*	-.502*	-.498*	-.419*	-.575*	.670**	-.639*	.668**	-.570*	-.906*	-.913*	-.886*	-.960*	-.859*	-.888*	.865**	1.000**
Age differences in literacy 1960																	
	Urban males																
198	(15-19)-(40-49)	-.681	-.586	-.272	-.420	.485*	-.518	.382*	-.392	-.283	-.301	-.338	-.240	-.253	-.271	.266*	.254*
199	(40-49)-(60+)	-.057	-.123	-.162	-.228	.080*	-.072	.112*	-.234	.203	.169	.170	.034	.106	.101	-.073*	-.122*
	Urban females																
200	(15-19)-(40-49)	-.722	-.696	-.406	-.735	.905*	-.801	.693*	-.717	-.595	-.590	-.608	-.523	-.816	-.752	.763*	.566*
201	(40-49)-(60+)	.760	.749	.448	.587	-.603*	.694	-.527*	.612	.323	.362	.392	.262	.430	.427	-.429*	-.267*

		Urban Literacy by Age 1960						Rural Literacy by Age 1960									
		Males				Females				Males				Females			
		40-49	30-39	25-29	10-14	40-49*	30-39	25-29*	10-14	40-49	30-39	25-29	10-14	40-49	30-39	25-29*	10-14*
	Variable Number	168	169	170	173	176	177	178	181	184	185	186	189	192	193	194	197
	Rural males																
202	(15-19)-(40-49)	.208	.221	.332	.254	-.208*	.292	-.351*	.296	.199	.272	.290	.498	.213	.300	-.229*	-.420*
203	(40-49)-(60+)	.572	.509	.349	.449	-.515*	.511	-.447*	.417	.547	.521	.513	.435	.514	.495	-.480*	-.425*
	Rural females																
204	(15-19)-(40-49)	-.434	-.435	-.232	-.441	.591*	-.476	.399*	-.423	-.091	-.047	-.085	.044	-.464	-.321	.384*	.042*
205	(40-49)-(60+)	.640	.576	.377	.603	-.735*	.683	-.600*	.597	.712	.667	.700	.670	.786	.732	-.707*	-.696*
	Male-female differences in literacy by age 1960																
	Urban males minus females																
207	50-59	-.413	-.444	-.247	-.578	.731*	-.658	.548*	-.617	-.442	-.433	-.451	-.435	-.792	-.696	.682*	.494*
208	40-49	-.560	-.594	-.360	-.704	.333*	-.772	.643*	-.739	-.534	-.533	-.558	-.529	-.853	-.769	.763*	.562*
209	30-39	-.646	-.657	-.509	-.754	.348*	-.837	.783*	-.789	-.534	-.567	-.575	-.611	-.830	-.796	.740*	.654*
210	25-29	-.643	-.676	-.501	-.767	.828*	-.830	.775*	-.803	-.477	-.576	-.511	-.551	-.769	-.748	.697*	.585*
211	20-24	-.504	-.567	-.395	-.650	.651*	-.695	.605*	-.717	....	....	.477	-.542	-.617	....	.607*	.559*
212	15-19	-.558	-.613	-.319	-.584	.669*	-.721	.535*	-.667	-.418	-.444	-.497	-.471	-.660	-.615	.607*	.461*
213	10-14	-.633	-.702	-.384	-.674	.655*	-.754	.561*	-.785	-.275	-.334	-.351	-.391	-.543	-.541	.511*	.400*
214	40-49 FU/M 1960	.719	.751	.469	.818	-.893*	.879	-.720*	.853	.501	.512	.541	.513	.822	.745	-.737*	-.536*
215	15-19 FU/M 1960*	-.609*	-.669*	-.362*	-.631*	.683**	-.750*	.555**	-.712*	-.372*	-.401*	-.451*	-.427*	-.627*	-.579*	.574**	.415**
	Rural males minus females																
217	50-59	-.545	-.569	-.375	-.631	.758*	-.686	.614*	-.660	-.236	-.251	-.255	-.231	-.673	-.593	.592*	.334*
218	40-49	-.568	-.595	-.394	-.676	.808*	-.749	.657*	-.711	-.351	-.359	-.389	-.364	-.781	-.700	.695*	.465*
219	30-39	-.514	-.547	-.363	-.603	.737*	-.694	.618*	-.646	-.355	-.385	-.402	-.378	-.747	-.750	.699*	.493*
220	25-29	-.452	-.524	-.309	-.609	.706*	-.671	.576*	-.662	-.461	-.479	-.459	-.466	-.796	-.772	.757*	.559*
221	20-24	-.528	-.589	-.421	-.674	.765*	-.733	.675*	-.709	....	....	-.493	-.489	-.808	....	.775*	.580*
222	15-19	-.384	-.421	-.230	-.530	.639*	-.605	.501*	-.586	-.429	-.447	.435	-.424	-.739	-.713	.678*	.539*
223	10-14	-.317	-.347	-.166	-.454	.572*	-.555	.434	-.523	-.410	-.432	-.444	-.411	-.693	-.666	.616*	.521*
224	40-49 FR/M 1960	.588	.608	.379	.691	-.835*	.795	-.674*	.726	.644	.640	.666	.634	.925	.857	-.833*	-.694*
225	15-19 FR/M 1960*	-.388*	-.423*	-.229*	-.527*	.642**	-.618*	.502**	-.593*	-.511*	-.526*	-.521*	-.505*	-.774*	-.747*	.706**	.593**
	Enrollment of youth																
265	Enrol 6-14 T 1937	.565	.596	.627	.635	-.626*	.663	-.731*	.668	.530	.608	.580	.727	.583	.659	-.609*	-.699*
266	Enrol 6-14 T 1960*	-.303*	-.356*	-.419*	-.467*	.387**	-.444	.492**	-.484*	-.585*	-.630*	-.592*	-.736*	-.460*	-.520*	.475**	.644**

		Age Differences in Literacy 1960								Male-Female Differences in Literacy by Age 1960									
		Urban				Rural				Urban				Rural				Enrol. Rates	
		Male		Female		Male		Female										T	
		(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)(60+)	(15-19)-(40-49)	(40-49)(60+)	40-49	25-29	20-24	10-14	40-59	25-29	20-24	10-14	1937	1960*
	Variable Number	198	199	200	201	202	203	204	205	208	210	211	213	218	220	221	223	265	266
	Age differences in literacy 1960																		
	Urban males																		
198	(15-19) - (40-49)	1.000	-.339	.519	-.644	.050	-.485	.163	-.480	.109	.178		.183	.117	-.015		.068	-.179	-.000*
199	(40-49) - (60+)	-.339	1.000	.000	.327	-.284	.308	.017	.212	.094	.101		.196	.053	.068		-.158	-.304	.254*
	Urban females																		
200	(15-19) - (40-49)	.519	.000	1.000	-.450	.034	-.460	.680	-.702	.834	.728		.455	.766	.651		.580	-.391	.239*
201	(40-49) - (60+)	-.644	.327	-.450	1.000	.026	.609	-.315	.467	-.376	-.390		-.546	-.393	-.340		.308	.299	-.055*
	Rural males																		
202	(15-19) - (40-49)	.050	.284	.034	.026	1.000	-.011	.327	.138	-.135	-.307		-.374	-.146	-.152		-.054	.712	-.537*
203	(40-49) - (60+)	-.485	.308	-.460	.609	-.011	1.000	-.291	.753	-.278	-.302		-.184	-.274	-.282		-.120	.182	-.075*
	Rural females																		
204	(15-19) - (40-49)	.163	.017	.680	-.315	.327	-.291	1.000	-.364	.611	.458		.243	.737	.508		.312	.049	-.327*
205	(40-49) - (60+)	-.480	.212	-.702	.467	.138	.753	-.364	1.000	-.609	-.549		-.371	-.569	-.517		-.482	.349	-.264*
	Male-female differences in literacy by age 1960																		
	Urban males minus females																		
207	50-59	-.018	.041	.751	-.237	-.117	-.213	.626	-.527	.953	.842	....	.602	.910	.857	....	.800	-.371	.278*
208	40-49	.109	.094	.834	-.376	-.135	-.278	.611	-.609	1.000	.851	.739	.676	.909	.861	.870	.814	-.460	-.370*
209	30-39	.196	.015	.742	-.422	-.366	-.368	.477	-.633	.870	.964	....	.710	.867	.797	....	.760	-.624	.419*
210	25-29	.178	.101	.728	-.390	-.307	-.302	.458	-.549	.851	1.000	.759	.730	.825	.798	.829	.740	-.576	.438*
211	20-24	.129	-.379	....	....	.553	.106	....	....	.739	.759	1.000	.781	.616	.696	.736	.726	-.714	.629*
212	15-19	.206	-.082	.499	-.610	-.314	-.190	.296	-.482	.759	.687	....	.808	.697	.678	....	.707	-.522	.392*
213	10-14	.183	.196	.455	-.546	-.374	-.184	.243	-.371	.676	.730	.781	1.000	.659	.688	.654	.644	-.616	.418*
214	40-49 FU/M 1960	-.252	-.099	-.841	.536	.160	.342	-.604	.622	-.969	-.859	.....	-.762	-.892	-.823	....	-.761	.504	-.375*
215	15-19 FU/M 1960*	.223*	-.040*	.498*	-.650*	-.293*	-.194*	.320*	-.453*	.749*	.682*	.....	.833*	.693*	.666*	....	.672*	-.513*	.376**

		Age Differences in Literacy 1960								Male-Female Differences in Literacy by Age 1960									
		Urban				Rural				Urban				Rural				Enrol. Rates	
		Male		Female		Male		Female										T	
		(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	40-49	25-29	20-24	10-14	40-49	25-29	20-24	10-14	1937	1960*
	Variable Number	198	199	200	201	202	203	204	205	208	210	211	213	218	220	221	223	265	266
	Rural males minus females																		
217	50-59	.100	.087	.716	-.383	-.064	-.233	.784	-.420	.807	.785	....	.598	.943	.828	....	.642	-.357	-.029*
218	40-49	.117	.053	.766	-.393	-.146	-.274	.737	-.569	.909	.825	.616	.659	1.000	.893	.883	.768	-.419	.127*
219	30-39	.115	.042	.695	-.354	-.222	-.255	.605	-.536	.817	.798	....	.636	.933	.905	....	.753	-.471	.144*
220	25-29	-.015	.068	.651	-.340	-.152	-.282	.508	-.517	.861	.798	.696	.688	.893	1.000	.948	.814	-.465	.276*
221	20-24	.110	-.111	.708	....	.708	.550	.505	....	.870	.829	.736	.654	.883	.948	1.000	.832	-.503	.339*
222	15-19	.061	-.091	.613	-.320	-.059	-.188	.363	-.519	.825	.754	....	.642	.829	.919	....	.934	-.389	.279*
223	10-14	.068	-.158	.580	-.308	-.054	-.120	.312	-.482	.814	.740	.726	.644	.768	.814	.832	1.000	-.340	.311*
224	40-49 FR/M 1960	-.189	.109	-.789	.465	.172	.396	-.546	.722	-.947	-.837	....	-.669	-.905	-.880	....	-.851	.492	-.373*
225	15-19 FR/M 1960*	.087*	-.137*	.614*	-.357*	-.087*	-.215*	.306*	-.548*	.839*	.751*	....	.641*	.792*	.893*	....	.943*	-.417*	.360**
265	Enrol 6-14 T 1937	-.179	-.304	-.391	.299	.712	.182	.049	.349	-.460	-.576	-.714	-.616	-.419	-.465	-.503	-.340	1.000	-.738*
266	Enrol 6-14 T 1960*	-.000*	-.254*	.239*	-.055*	-.537*	-.075*	-.327*	-.264*	.370*	.438*	.629*	.418*	.127*	.276*	.339*	.311*	-.738*	1.000**

		Adult Levels of Schooling															
		No Schooling Adults Age				7+ Years of School Adults Age				10+ Years of School Adults Age				BAC Adults Age		Univ Adults Age	
		25+ 1950		30+ 1960		25+ 1950		30+ 1960		25+ 1950		30+ 1960		15+ 1940			
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	Variable Number	226	227	228	229	236	237	238	239	240	241	242	243	248	249	250	251
Adult levels of schooling																	
	Low levels																
254	6 + 0 Sch M 1940*	-.750*	-.585*	-.765*	-.665*	.679*	.540*	.692*	.566*	.640*	.486*	.661*	.536*	.364*	.159*	.488*	.516*
255	6 + 0 Sch F 1940*	-.812*	-.683*	-.825*	-.777*	.761*	.646*	.768*	.661*	.719*	.562*	.738*	.619*	.407*	.188*	.561*	.617*
261	6 + 6 + Yrs Sch M 1940	-.870	-.785	-.867	-.829	.953	.914	.936	.904	.934	.882	.916	.879	.637	.466	.882	.881
262	6 + 6 + Yrs Sch F 1940	-.850	-.807	-.850	-.875	.927	.949	.930	.952	.912	.899	.913	.929	.638	.523	.864	.914
226	Adult 25+0 M 1950	1.000	.854	.982	.910	-.867	-.828	-.844	-.825	-.818	-.758	-.819	-.800	-.392	-.269	-.663	-.709
227	Adult 25+0 F 1950	.854	1.000	.839	.865	-.800	-.800	-.797	-.797	-.760	-.707	-.774	-.763	-.356	-.297	-.626	-.731
228	Adult 30+0 M 1960	.982	.839	1.000	.928	-.858	-.836	.853	-.840	-.798	-.761	-.819	-.806	-.443	-.312	-.680	-.723
229	Adult 30+0 F 1960	.910	.865	.928	1.000	-.825	-.863	-.828	-.859	-.775	-.759	-.803	-.822	-.475	-.377	-.677	-.775
259	0 Sch F/M 1950	-.037	.474	-.042	.183	-.093	-.184	-.129	-.177	-.100	-.112	-.132	-.151	-.017	-.112	-.091	-.238
260	0 Sch F/M 1960	.140	.373	.127	.461	-.207	-.364	-.238	-.344	-.203	-.254	-.249	-.317	-.069	-.193	-.176	-.360
258	0 Sch M 1950-1960	.684	.552	.556	.560	-.557	-.489	-.460	-.456	-.563	-.440	-.479	-.484	-.097	-.037	-.379	-.373
232	Adult 25+ 1-6 M 1950*	.982*	.823*	.983*	.920*	-.809*	-.784*	-.793*	-.789*	-.753*	-.707*	-.763*	-.766*	-.405*	-.267*	-.618*	-.664*
233	Adult 25+ 1-6 F 1950*	.849*	.820*	.876*	.973*	-.762*	-.818*	-.775*	-.810*	-.701*	-.697*	-.753*	-.774*	-.409*	-.301*	-.606*	-.703*
234	Adult 30+ 1-6 M 1960*	.948*	.795*	.981*	.915*	-.782*	-.764*	-.770*	-.767*	-.711*	-.680*	-.728*	-.730*	-.438*	-.290*	-.614*	-.658*
235	Adult 30+ 1-6 F 1960*	.433*	.418*	.448*	.473*	-.411*	-.463*	-.446*	-.381*	-.374*	-.526*	-.412*	-.327*	-.174*	-.173*	-.280*	-.313*

		Adult Levels of Schooling															
		No Schooling Adults Age				7+ Years Adults of School Age				10+ Years of School Adults Age				BAC Adults Age		Univ Adults Age	
		25+ 1950		30+ 1960		25+ 1950		30+ 1960		25+ 1950		30+ 1960		15+ 1940			
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	Variable Number	226	227	228	229	236	237	238	239	240	241	242	243	248	249	250	251
	High levels																
236	Adult 25+7+M 1950	-.867	-.800	-.858	-.825	1.000	.938	.970	.910	.982	.895	.960	.880	.562	.425	.850	.826
237	Adult 25+7+F 1950	-.828	-.800	-.836	-.863	.938	1.000	.945	.976	.906	.958	.923	.946	.613	.548	.845	.877
238	Adult 30+7+M 1960	-.844	-.797	-.853	-.828	.970	.945	1.000	.953	.962	.915	.991	.934	.591	.483	.834	.848
239	Adult 30+7+F 1960	-.825	-.797	-.840	-.859	.910	.976	.953	1.000	.889	.934	.935	.985	.611	.567	.815	.883
240	Adult 25+10+M 1950	-.818	-.760	-.798	-.775	.982	.906	.962	.889	1.000	.894	.973	.882	.582	.453	.842	.802
241	Adult 25+10+F 1950	-.758	-.707	-.761	-.759	.895	.958	.915	.934	.894	1.000	.905	.931	.680	.637	.844	.835
242	Adult 30+10+M 1960	-.819	-.774	-.819	-.803	.960	.923	.991	.935	.973	.905	1.000	.932	.583	.475	.815	.815
243	Adult 30+10+F 1960	-.800	-.763	-.806	-.822	.880	.946	.934	.985	.882	.931	.932	1.000	.625	.604	.799	.851
244	Adult 25+13+M 1950	-.766	-.736	-.739	-.746	.949	.890	.935	.877	.986	.887	.958	.882	.595	.478	.838	.803
245	Adult 25+13+F 1950	-.515	-.515	-.510	-.505	.662	.775	.700	.724	.670	.875	.696	.719	.464	.518	.572	.583
246	Adult 30+13+M 1960	-.771	-.759	-.770	-.792	.924	.918	.964	.932	.944	.890	.978	.933	.595	.536	.828	.843
247	Adult 30+13+F 1960	-.692	-.719	-.693	-.747	.795	.884	.851	.921	.793	.835	.849	.931	.569	.618	.762	.843
248	Adult 15+Bac M 1940	-.392	-.356	-.443	-.475	.562	.613	.591	.611	.582	.680	.583	.625	1.000	.794	.788	.741
249	Adult 15+Bac F 1940	-.269	-.297	-.312	-.377	.425	.548	.483	.567	.453	.637	.475	.604	.794	1.000	.667	.686
250	Adult 15+Un M 1940	-.663	-.626	-.680	-.677	.850	.845	.834	.815	.842	.844	.815	.799	.788	.667	1.000	.917
251	Adult 15+Un F 1940	-.709	-.731	-.723	-.775	.826	.877	.848	.883	.802	.835	.815	.851	.741	.686	.917	1.000

		Enrollments										
		Primary School Enrollments						Enrollment at 6 Years 1959				
		Total		Males	Urban	Rural	U/R	Monthly Income in Pesos			Occupation	
		1937	1960*	1930	1960			$200	$601 to $1,000	(601 to 1,000) - (200)	Ag	Prof
	Variable Number	265	266	267	273	274	275	278	280	282	283	284
Enrollment												
263	Preschool 1944	.470	-.377*	.318	.150	.432	.027	.044	.041	.022	-.051	-.068
264	Preschool 1960	.496	-.603*	.410	.437	.407	.141	-.151	.240	.199	.102	.008
265	Enrol 6-14 T 1937	1.000	-.719*	.614	.341	.523	-.072	-.028	.261	-.183	.284	.180
266	Enrol 6-14 T 1960*	-.719*	1.000**	-.744*	-.341*	-.750*	-.187*	.123*	-.297*	.030*	-.353*	-.195*
267	Enrol 6-14 M 1930	.614	-.744*	1.000	.068	.634	.096	.042	.311	-.048	.482	.361
268	Enrol 6-14 F 1930	.631	-.737*	.962	.111	.575	.150	.051	.348	-.084	.524	.392
269	Enrol 6-14 F/M 1930	.317	-.287*	.312	.187	.062	.232	.051	.268	-.140	.363	.258
270	Enrol 6-14 M 1960*	-.636*	.872**	-.653*	-.458*	-.784*	-.224*	.149*	-.158*	-.058*	-.228*	-.012*
271	Enrol 6-14 F 1960*	-.715*	.876**	-.629*	-.524*	-.715*	-.286*	.186*	-.158*	-.027*	-.223*	-.033*
272	Enrol 6-14 F/M 1960	.308	-.202*	.056	.276	-.035	.236	-.049	.097	-.116	.121	.168
273	Enrol 6-14 Urban 1960	.341	-.341*	.068	1.000	-.085	.095	-.198	.075	.071	.091	-.261
274	Enrol 6-14 Rural 1960	.523	-.750*	.634	-.085	1.000	.114	.123	.218	-.014	.247	.205
275	Enrol 6-14 U-R 1960	-.072	-.187*	.096	.095	.114	1.000	-.405	-.200	.249	-.247	-.097
276	Enrol 7-12 M 1950	.637	-.732*	.736	.363	.441	.121	.063	.218	-.301	.495	.040
277	Enrol 7-12 F 1950	.674	-.752*	.726	.403	.418	.129	.058	.270	-.273	.528	.088
	Enrol and income in pesos monthly 1959											
278	Enrol 6/Inc $200	-.028	.123*	.042	-.198	.123	-.405	1.000	.383	-.363	.523	.402
280	Enrol 6/$601 to $1,000	.261	-.297*	.311	.075	.218	-.200	.383	1.000	.347	.749	.615
282	Enrol 6/(601-1,000)-(200)	-.183	.030*	-.048	.071	-.014	.249	-.363	.347	1.000	-.095	.007
	Enrol and occupation of father 1959											
283	Enrol 6/Agriculture	.284	-.353*	.482	.091	.247	-.247	.523	.749	-.095	1.000	.559
284	Enrol 6/Professional	.180	-.195*	.361	-.261	.205	-.097	.402	.615	.007	.559	1.000
285	Enrol 6/Prof-Ag	-.064	.088*	.034	-.380	.014	.126	.073	.132	.095	-.135	.713

		Continuation Rates Based on Beginning of Year Enrollments																		
		1942							1960								1960-1942	
		Urban			Rural			U-R	Urban			Rural			U-R	Urban	Rural
		Grades																
		4/3	5/4	6/5	4/3	5/4	6/5	4/3	4/3*	5/4	6/5	4/3	5/4	6/5	4/3	4/3	
	Variable Number	288	289	290	293	294	295	296	299	300	301	304	305	306	307	308	309
	Continuation rates--primary school																	
	1942 urban--beginning of year enrol																	
288	B 4/3	1.000	.795	.497	.424	.447	.384	.252	-.310*	.092	.269	.064	.049	.153	.105	-.782	-.357
289	B 5/4	.795	1.000	.653	.295	.678	.469	.212	-.432*	.042	.399	.109	.313	.361	.106	-.479	-.207
290	B 6/5	.497	.653	1.000	-.005	.215	.167	.371	-.298*	.235	.311	.008	.121	.425	.128	-.302	.012
	1942 rural																	
293	B 4/3	.424	.295	-.005	1.000	.135	.166	-.741	-.389*	.197	.115	.496	.219	-.169	-.380	-.241	-.429
294	B 5/4	.447	.678	.215	.135	1.000	.561	.152	-.403*	-.001	.547	.165	.488	.411	.059	-.085	.023
295	B 6/5	.384	.469	.167	.166	.561	1.000	.073	-.268*	.041	.380	.094	.288	.162	.051	-.160	-.080
296	4/3 urban-rural 1942	.252	.212	.371	-.741	.152	.073	1.000	.231*	-.153	-.002	-.416	-.171	.279	.384	-.321	.297
	1960 urban																	
299	B 4/3*	-.310*	-.432*	-.298*	-.389*	-.403*	-.268*	.231*	1.000**	-.631*	-.570*	-.487*	-.358*	-.089*	.108*	-.296*	-.082*
300	B 5/4	.092	.042	.235	.197	-.001	.041	-.153	-.631*	1.000	.333	.332	.022	-.122	-.041	.351	.122
301	B 6/5	.269	.399	.311	.115	.547	.380	-.002	-.570*	.333	1.000	.211	.187	.177	.063	.167	.047
	1960 rural																	
304	B 4/3	.064	.109	.008	.496	.165	.094	-.416	-.487*	.332	.211	1.000	.423	-.003	-.908	.200	.551
305	B 5/4	.049	.313	.121	.219	.488	.288	-.171	-.358*	.022	.187	.423	1.000	.312	-.302	.183	.227
306	B 6/5	.153	.361	.425	-.169	.411	.162	.279	-.089*	-.122	.177	-.003	.312	1.000	.062	-.046	.147
307	4/3 urban-rural 1960	.105	.106	.128	-.380	.059	.051	.384	.108*	-.041	.063	-.908	-.302	.062	1.000	-.095	-.591
308	4/3 urban 1960-1942	-.782	-.479	-.302	-.241	-.085	-.160	-.321	-.296*	.351	.167	.200	.183	-.046	-.095	1.000	.425
309	4/3 rural 1960-1942	-.357	-.207	.012	-.429	.023	-.080	.297	-.082*	.122	.047	.551	.227	.147	-.591	.425	1.000
	1942 urban--end of year day school																	
312	ED 4/3	.892	.759	.581	.222	.501	.346	.394	-.229*	-.009	.357	.006	.021	.201	.129	-.715	-.221
313	ED 5/4	.787	.886	.774	.174	.429	.244	.355	-.319*	.031	.341	.009	.069	.314	.144	-.572	-.179
314	ED 6/5	.478	.529	.904	-.001	.100	.045	.368	-.179*	.115	.299	-.032	.004	.354	.104	-.384	-.021
	1942 rural																	
317	ED 4/3	.314	.223	-.044	.928	.034	.052	-.805	-.312*	.155	.142	.437	.197	-.225	-.353	-.191	-.473
318	ED 5/4	.472	.677	.240	.169	.993	.574	.135	-.437*	.061	.567	.189	.495	.404	.053	-.083	.015
319	ED 6/5	.362	.303	.211	.142	.382	.648	.106	-.171*	.041	.307	.020	.195	.215	.082	-.211	-.111

		Continuation Rates Based on Beginning of Year Enrollments															
		1942							1960							1960-1942	
		Urban			Rural			U-R	Urban			Rural			U-R	Urban	Rural
		Grades															
		4/3	5/4	6/5	4/3	5/4	6/5	4/3	4/3*	5/4	6/5	4/3	5/4	6/5	4/3	4/3	
	Variable Number	288	289	290	293	294	295	296	299	300	301	304	305	306	307	308	309
	1960 urban--end of year day and night school																
322	E 4/3	.347	.425	.225	.403	.465	.207	-.235	-.914*	.702	.615	.447	.286	.034	-.042	.285	.017
323	E 5/4	.042	.036	.161	.216	-.033	.054	-.222	-.657*	.874	.349	.350	-.040	-.139	-.056	.414	.117
324	E 6/5	.299	.438	.250	.117	.648	.451	.015	-.565*	.274	.965	.192	.234	.203	.093	.151	.025
	1960 rural																
327	E 4/3	.066	.129	.009	.491	.199	.093	-.413	-.492*	.319	.229	.996	.460	.001	-.898	.208	.549
328	E 5/4	.039	.293	.112	.212	.445	.218	-.166	-.312*	-.005	.163	.432	.991	.280	-.331	.164	.244
329	E 6/5	.174	.396	.404	-.124	.392	.138	.236	-.080*	-.151	.206	.080	.403	.948	-.029	-.072	.174
330	B 5/1 urban 1942	.524	.332	-.145	.632	.291	.320	-.339	-.228*	.132	-.019	.184	.161	-.246	-.065	-.378	-.451
331	B 5/1 rural 1942	.477	.542	.044	.640	.777	.547	-.354	-.542*	.173	.509	.482	.545	.148	-.240	-.078	-.133
332	B 5/1 urban 1960*	-.148*	.024*	.125*	-.497*	-.049*	-.130*	.405*	.469**	-.627*	-.146*	-.491*	-.248*	.272*	.288*	-.179*	-.022*
333	B 5/1 rural 1960	.035	.057	-.200	.515	.306	.218	-.510	-.390*	.127	.185	.655	.738	.097	-.549	.182	.159

	Continuation Rates Based on End of Year Enrollment															
	Day School						Day and Night School						Beginning of Year Enrollment			
	Urban			Rural			Urban			Rural			Urban	Rural	Urban*	Rural
	1942						1960						1942		1960	
	Grades															
	4/3	5/4	6/5	4/3	5/4	6/5	4/3	5/4	6/5	4/3	5/4	6/5	5/1		5/1	
Variable Number	312	313	314	317	318	319	322	323	324	327	328	329	330	331	332	333
Continuation rates																
1942 urban--end of year																
ED 4/3	1.000	.864	.657	.137	.526	.304	.262	-.071	.396	.018	.021	.231	.369	.396	-.009*	-.070
ED 5/4	.864	1.000	.777	.112	.436	.191	.289	.019	.349	.018	.073	.357	.157	.268	.144*	-.181
ED 6/5	.657	.777	1.000	.028	.125	.131	.098	-.003	.235	-.036	.009	.368	-.188	-.044	.187*	-.237
1942 rural																
ED 4/3	.137	.112	-.028	1.000	.068	.035	.332	.146	.108	.444	.209	-.144	.608	.562	-.468*	.511
ED 5/4	.526	.436	.125	.068	1.000	.419	.510	.021	.667	.224	.444	.388	.333	.808	-.132*	.340
ED 6/5	.304	.191	.131	.035	.419	1.000	.138	-.010	.363	.023	.172	.264	.345	.438	-.226*	.243
1960 urban																
E 4/3	.262	.289	.098	.332	.510	.138	1.000	.749	.648	.459	.252	.048	.297	.597	-.553*	.385
E 5/4	-.071	.019	-.003	.146	.021	-.010	.749	1.000	.333	.336	-.066	-.172	.048	.148	-.536*	.115
E 6/5	.396	.349	.235	.108	.667	.363	.648	.333	1.000	.215	.209	.250	.036	.576	-.144*	.257
1960 rural																
E 4/3	.018	.018	-.036	.444	.224	.023	.459	.336	.215	1.000	.474	.094	.201	.511	-.506*	.681
E 5/4	.021	.073	.009	.209	.444	.172	.252	-.066	.209	.474	1.000	.399	.160	.518	-.261*	.742
E 6/5	.231	.357	.368	-.144	.388	.264	.048	-.172	.250	.094	.399	1.000	-.189	.175	.205*	.219
B 5/1 Urban 1942	.369	.157	-.188	.608	.333	.345	.297	.048	.036	.201	.160	-.189	1.000	.640	-.642*	.427
B 5/1 Rural 1942	.396	.268	-.044	.562	.808	.438	.597	.148	.576	.511	.518	.175	.640	1.000	-.496*	.661
B 5/1 Urban 1960*	-.009*	.144*	-.237*	-.468*	-.132*	-.226*	-.553*	-.536*	-.144*	-.506*	-.261*	-.205*	-.642*	-.496*	1.000**	-.593*
B 5/1 Rural 1960	-.070	-.181	.187	.511	.340	.243	.385	.115	.257	.681	.742	.219	.427	.661	-.593*	1.000

		Age Grade Progress in School, Pass Rates, and School Facilities														
		Age Grade Progress in School 1963								Pass Rates		Schools Incomplete				
		Males				Females				1960		1942		1960	1942-1960	
		Age 10 Grade 1			Age 12 Grade 3+	Age 10 Grade 1			Age 12 Grade 3+	Grade 2						
		Urban	Rural	R-U	Rural	Urban	Rural	R-U	Rural	Urban	Rural	Urban	Rural*	Total	Urban	Rural
	Variable Number	347	348	349	353	359	360	361	365	376	377	389	390	395	396	397
Age grade progress in school																
	Males															
344	Age 8 Gr 1+ MU 1963	-.823	-.587	-.429	.679	-.741	-.604	-.289	.654	.509	.327	-.329	.452*	-.306	-.038	-.161
345	Age 8 Gr 1+ MR 1963	-.792	-.775	-.687	.843	-.723	-.779	-.559	.836	.475	.436	-.408	.569*	-.439	-.175	-.262
346	Age 8 Gr 1+ MU-R	.208	.566	.641	-.528	.195	.500	.646	-.552	-.025	-.282	.308	-.380*	.296	.257	.372
347	Age 10 Gr 1 MU 1963	1.000	.704	.593	-.697	.906	.794	.338	-.684	-.543	-.378	.292	-.431*	.435	.136	.080
348	Age 10 Gr 1 MR 1963	.704	1.000	.828	-.772	.696	.867	.901	-.784	-.215	-.319	.265	-.532*	.488	.083	.252
349	Age 10 Gr 1 MR-MU	.593	.828	1.000	-.719	.602	.928	.740	-.727	-.158	-.212	.253	-.509*	.529	.145	.138
350	Age 10 Gr 3+ MU 1963	-.865	-.567	-.408	.627	-.754	-.604	-.243	.597	.605	.396	-.287	.357*	-.256	-.104	-.115
351	Age 10 Gr 3+ MR 1963	-.736	-.857	-.776	.935	-.649	-.826	-.701	.936	.348	.298	-.311	.605*	-.554	-.120	-.246
352	Age 12 Gr 3+ MU 1963	-.603	-.462	-.314	.623	-.567	-.456	-.258	.584	.333	.224	-.108	.271*	-.134	-.009	-.097
353	Age 12 Gr 3+ MR 1963	-.697	-.772	-.719	1.000	-.601	-.758	-.617	.985	.295	.245	-.251	.627*	-.650	-.054	-.186
354	Gr MO 13 MU 1963	-.670	-.352	-.247	.445	-.568	-.437	-.065	.427	.475	.264	-.189	.296*	-.292	-.143	-.050
355	Gr MO 13 MR 1963	-.392	-.604	-.569	.771	-.397	-.594	-.568	.746	.075	.129	.044	.299*	-.495	.152	.094
	Females															
356	Age 8 Gr 1+ FU 1963	-.823	-.569	-.483	.611	-.829	-.676	-.259	.589	.420	.225	-.315	.374*	-.277	-.076	-.057
357	Age 8 Gr 1+ FR 1963	-.781	-.747	-.648	.792	-.754	-.775	-.522	.796	.513	.471	-.378	.505*	-.421	-.076	-.192
358	Age 8 Gr 1+ FU-R	.287	.593	.517	-.592	.233	.454	.642	-.629	-.292	-.516	.251	-.358*	.323	-.023	.347
359	Age 10 Gr 1 FU 1963	.906	.696	.602	-.601	1.000	.827	.384	-.610	-.368	-.230	.256	-.282*	.370	.046	-.045
360	Age 10 Gr 1 FR 1963	.794	.867	.928	-.758	.827	1.000	.665	-.769	-.285	-.254	.245	-.466*	.564	.127	.026
361	Age 10 Gr 1 FR-FU	.338	.901	.740	-.617	.384	.665	1.000	-.634	.027	-.213	.178	-.433*	.375	.009	.290
362	Age 10 Gr 3+ FU	-.368	-.577	-.406	.585	-.852	-.652	-.247	.576	.574	.366	-.217	.246*	-.263	-.009	-.002
363	Age 10 Gr 3+ FR	-.519	-.614	-.793	.490	-.619	-.782	-.490	.488	.030	-.150	-.165	.268*	-.247	-.270	.052

		Age Grade Progress in School,							Pass Rates, and School Facilities							
		Age Grade Progress in School 1963								Pass Rates		Schools Incomplete				
		Males				Females				1960		1942		1960	1942-1960	
		Age 10 Grade 1			Age 12 Grade 3+	Age 10 Grade 1			Age 12 Grade 3+	Grade 2						
		Urban	Rural	R-U	Rural	Urban	Rural	U-R	Rural	Urban	Rural	Urban	Rural*	Total	Urban	Rural
	Variable Number	347	348	349	353	359	360	361	365	376	377	389	390	395	396	397
364	Age 12 Gr 3+ FU*	.588*	.458*	.299*	-.569*	.599*	.446*	.274*	-.523*	-.251*	-.184*	.116*	-.222**	.087*	-.015*	.071*
365	Age 12 Gr 3+ FR	-.684	-.784	-.727	.985	-.610	-.769	-.634	1.000	.272	.233	-.274	.635*	-.664	-.048	-.202
366	Gr HD 13 FU 1963	-.532	-.207	-.152	.181	-.480	-.320	.059	.150	.407	.253	-.009	.139*	-.139	-.030	.071
367	Gr HD 13 FR 1963	-.479	-.702	-.721	.764	-.478	-.719	-.642	.822	.097	.169	-.072	.470*	-.656	.061	-.148
	Pass rates															
368	Pass 2/Pres U 1942	-.608	-.364	-.363	.331	-.568	-.459	-.113	.327	.726	.605	-.275	.324*	-.351	-.064	-.113
369	Pass 2/Pres R 1942	-.592	-.410	-.326	.399	-.544	-.435	-.206	.422	.666	.549	-.272	.328*	-.395	-.005	-.136
370	Pass 4/Pres U 1942	-.479	-.246	-.188	.212	-.387	-.281	-.054	.186	.798	.732	-.153	.134*	-.166	.053	-.108
371	Pass 4/Pres R 1942	-.540	-.491	-.395	.410	-.654	-.511	-.347	.449	.340	.224	-.374	.410**	-.333	-.005	-.220
372	Pass 6/Pres U 1942*	.366*	.162*	.078*	-.119*	.296*	.172*	-.018*	-.090*	-.700*	-.561*	.129*	-.073	.070*	-.007*	.123*
376	Pass 2/Pres U 1960	-.543	-.215	-.158	.295	-.368	-.285	.027	.272	1.000	.710	-.198	.184*	-.279	-.020	-.072
377	Pass 2/Pres R 1960	-.378	-.319	-.212	.245	-.230	-.254	-.213	.233	.710	1.000	-.263	.202*	-.290	.022	-.072
378	Pass 4/Pres U 1960*	.491*	.238*	.200*	-.233*	.350*	.289*	.052*	-.189*	-.914*	-.717*	.095*	-.116**	.218*	-.069*	.070*
379	Pass 4/Pres R 1960	-.219	-.214	-.128	.125	-.125	-.137	-.176	.120	.694	.871	-.219	-.050*	-.168	.073	-.027
380	Pass 6/Pres U 1960	-.313	-.040	-.068	.196	-.188	-.110	.130	.141	.789	.623	-.269	.173*	-.151	-.126	-.124
381	Pass 6/Pres R 1960	-.037	.097	.048	-.173	-.139	.014	.152	-.189	.331	.398	.068	-.119*	.006	.433	.141
	Schools incomplete															
389	Sch Incomplete U 1942	.292	.265	.253	-.251	.256	.245	.178	-.274	-.198	-.263	1.000	-.633*	.177	.614	.538
390	Sch Incomplete R 1942*	-.431*	-.532*	-.509*	.627*	-.232*	-.466*	-.433*	.635*	.184*	.202*	-.633*	1.000**	-.563*	-.372*	-.639*
391	Sch Incomplete U 1950	.327	.263	.336	-.239	.186	.320	.144	-.229	-.261	-.165	.255	-.221*	.037	.353	-.013
392	Sch Incomplete R 1950	.323	.531	.536	-.705	.315	.506	.488	-.737	-.146	-.085	.349	-.685*	.749	.065	.309
393	Sch Incomplete U 1960	.105	.183	.298	-.079	.271	.268	.180	-.102	.022	-.060	.170	-.142*	.161	-.446	-.057
394	Sch Incomplete R 1960	.457	.538	.611	-.746	.418	.628	.422	-.773	-.199	-.161	.258	-.618*	.915	-.036	-.031
395	Sch Incomplete T 1960	.435	.488	.529	-.650	.370	.564	.375	-.664	-.279	-.290	.177	-.563*	1.000	-.084	-.082
396	Sch Incomplete U 1942-60	.136	.083	.145	-.054	.046	.127	.009	-.048	-.020	.022	.614	-.372*	-.084	1.000	.385
397	Sch Incomplete R 1942-60	.080	.252	.138	-.186	-.045	.026	.290	-.202	-.072	-.072	.538	-.639*	-.082	.385	1.000

		Secondary Schooling					
		Enrol 15-17		Cont Sec 3/1		Pass Sec Exam	
		1950		1960		1960	
		M	F	M	F	M	F*
	Variable Number	334	335	338	337	340	341
334	Enrol 15-17 M 1950	1.000	.852	.152	.116	.198	-.080*
335	Enrol 15-17 F 1950	.852	1.000	-.019	.057	.179	.045*
Continuation rates in secondary school							
338	Cont Sec 3/1 M 1960	.152	-.019	1.000	.612	-.197	.247*
339	Cont Sec 3/1 F 1960	.116	.057	.612	1.000	-.214	.215*
Pass secondary school exam							
340	Pass Sec Exam M 1960	.198	.179	-.197	-.214	1.000	-.838*
341	Pass Sec Exam F 1960*	-.080*	.045*	.247*	-.215*	-.838*	1.000**

TABLE 63

CORRELATION MATRIX OF EDUCATION VARIABLES: LITERACY, ADULT LEVELS OF SCHOOLING, PRIMARY SCHOOL ENROLLMENTS, AND PROGRESS IN SCHOOL AGAINST NON-EDUCATION VARIABLES: POPULATION DISTRIBUTION AND CHANGE, TRANSPORTATION, UTILITY AND COMMUNICATION FACILITIES, OCCUPATIONAL AND ECONOMIC, AND CULTURAL CHARACTERISTICS

		Literacy 10+ Yrs.		Literacy 40+ Yrs.				Literacy 6+0 School		Literacy of Youth 10-14 Yrs.						Changes in Literacy of Youth 10-14 Yrs.				Literacy 6+ Yrs
		T		M	F	M	F	M	F*	M	F*	M	F	M	F	M	F	M*	F*	
		1940	1960	1940		1960		1940		1930		1940		1960		1940-1930		1960-1940		1960-1950/1960-1940
	Variable Number	140	141	145	146	147	148	153	154	155	156	157	158	159	160	161	162	163	164	165
	Population distribution and change																			
1	Density 1940	-.618	-.561	-.505	-.604	-.536	-.593	....	....	....	....	....	....	....	....	-.464	-.536	-.596*	-.643*	.466
2	Density 1960	-.531	-.502	-.392	-.517	-.463	-.538	.196	....	-.446	.446*	-.511	-.542	-.424	-.453	-.411	-.511	-.504*	-.563*	.363
4	Urban 1940	.785	.761	.776	.777	.814	.774	-.592	....	.731	-.736*	.736	.748	.756	.742	.457	.358	.436*	.554*	-.141
6	Urban 1960	.773	.733	.770	.771	.777	.742	....	....	....	....	....	....	....	....	.513	.369	.474*	.574*	-.077
8	Capital/Urban 1940	.337	.268	.365	.342	.298	.276	-.407	....	.323	-.259*	.318	.306	.291	.255	.154	.259	.257*	.318*	-.342
9	Capital/Urban 1960	.388	.346	.378	.412	.362	.381	....	....	....	....	....	....	....	....	.204	.291	.291*	.348*	-.355
10	Capital Size 1940	.028	.062	-.014	.085	.071	.122	-.182	....	-.026	.011*	.010	.050	.021	.023	.140	.155	-.021*	.085*	.080
11	Capital Size 1960	.245	.242	.189	.308	.245	.314	....	....	....	....	....	....	....	....	.327	.301	.219*	.306*	-.074
12	Pop 50,000+ 1960	.600	.557	.558	.588	.581	.583	-.539	....	.499	-.669*	.608	.614	.489	.520	.498	.406	.597*	.595*	-.269
13	Urban 1960/1930	.484	.364	....	....	....	....	....	....	.414	-.581*	.505	.473	.390	.383	.387	.297	.514*	.482*	-.445
14	Urban 1960-1950/1960-1940	.263	.314	....	....	....	....	-.241	....	.229	-.210*	.193	.221	.225	.253	.039	.075	.077*	.112*	-.303
15	Born Instate M 1940*	.769*	.690*	.799*	.757*	.683*	.666*	....	....	.648*	-.716**	.714*	.743*	.720*	.725*	.549*	.508*	.449**	.574**	-.321*
17	Born Instate M 1960	-.718	-.578	-.781	-.694	-.623	-.565	....	....	....	....	....	....	....	....	....	....	....	....	....
	Transportation																			
18	RR/Pop 1940	....	....	....	....	....	....	-.022	....	.142	-.141*	.147	.149	.145	.143	.127	.089	.088*	.112*	.207
23	Roads/Pop^B 1940	.748	.698	.728	.695	.650	.631	-.055	.141*	.608	.788*	.631	.659	.561	.597	.294	.225	.520*	.580*	-.531
24	Roads/Pop 1960	....	....	....	....	....	....	....	....	....	....*	....	....	....	....	.342	.418	.394*	.475*	-.313
26	Roads/Area^B 1940	....	-.023	.145	.013	.023	-.050	-.234	.253*	.106	-.084*	-.040	-.049	.044	.046	-.351	-.387	-.185*	-.207*	-.134
27	Roads/Area 1960	-.329	-.300	-.182	-.325	-.273	-.363	.119	-.108*	-.231	.274*	-.322	-.349	-.195	.232	-.343	-.433	-.446*	-.465*	.292
28	Roads Paved/Roads 1960	....	....	....	....	....	....	-.195	....	.356	-.417*	.375	.386	.377	.362	.274	.178	.224*	.315*	-.031
29	Bicycles/Pop 1940	.393	.347	....	....	....	....	....	....	....	....*	.418	.413	....	....	.224	.239	.286*	.328*	.125
30	Bicycles/Pop 1960	....	....	....	....	....	....	-.281	....	.324	-.121*	.211	.215	.261	.245	-.045	.056	.055*	.115*	.100
31	Bicycles 1960-1940	.167	.176	....	....	....	....	....	....	....	....	.131	.146	....	....	-.095	.002	-.086*	-.003*	.135
32	Autos/Pop 1940	.768	.698	.737	.786	.730	.740	-.599	....	.632	-.826*	.724	.751	.645	.677	.536	.421	.599*	.662*	-.319
33	Autos/Pop 1960	.825	.773	.797	.831	.803	.787	....	....	....	....	....	....	....	....	.607	.510	.652*	.697*	-.327
34	Autos/Pop 1960/1939	.048	.040	....	....	....	....	....	....	....	....	.100	.044	....	....	.029	.124	.105*	.016*	-.272
35	Autos/Pop 1960-1940	.451	.482	....	....	....	....	....	....	....	....	.457	.489	....	....	.432	.442	.275*	.361*	.151

		Literacy 10+ Yrs.		Literacy 40+ Yrs.				Literacy 6+0 School		Literacy of Youth 10-14 Yrs.						Changes in Literacy of Youth 10-14 Yrs.				Literacy 6+ Yrs
		T		M	F	M	F	M	F*	M	F*	M	F	M	F	M	F	M*	F*	
		1940	1960	1940		1960		1940		1930		1940		1960		1940-1930		1960-1940		1960-1950/ 1960-1940
	Variable Number	140	141	145	146	147	148	153	154	155	156	157	158	159	160	161	162	163	164	165
Utility and communication facilities																				
36	Elect/Capita 1940	.320	.294	.305	.395	.314	.378	-.401	....	.207	-.418*	.267	.306	.252	.282	.216	.066	.187*	.257*	-.106
37	Elect/Capita 1960	.556	.543	.548	.588	.585	.577	....	....	.451	-.633*	.512	.527	.480	.509	.360	.258	.373*	.398*	-.369
38	Elect/Capita 1960-1940	.457	.537	....	....	....	....	....	....	....	....	.429	.456	....	....	.415	.314	.169*	.208*	.079
39	Movies/Pop 1940	.819	.697	.783	.764	.727	.699	-.522	....	.756	-.774*	.831	.833	.724	.711	.610	.627	.733*	.823*	-.280
40	Movies/Pop 1960	.662	.655	.580	.708	.617	.711	-.298	....	.510	-.667*	.618	.689	.600	.645	.573	.449	.428*	.578*	-.070
41	Movies/Pop 1960-1940	.034	.088	....	....	....	....	....	....	....	....	.031	.051	....	....	.085	-.096	-.016*	-.002*	.060
42	Library Use 1940	.319	.288	....	....	....	....	-.393	....	.247	-.404*	.264	.312	.281	.286	.170	.009	.126*	.267*	.082
43	Running Water 1960	.426	.422	.373	.494	.416	.482	-.319	....	.368	-.476*	.394	.427	.429	.410	.297	....	.190*	....	....
44	Radio 1960	.865	.866	.823	.864	.862	.860	-.399	....	.738	-.823*	.830	.863	.838	.857	.686	.559	.525*	.636*	-.155
Marriage and fertility rates																				
45	Single F 20-24 1960	.267	.342	.202	.350	.284	.417	-.205	....	.156	-.203*	.169	.265	.300	.344	.207	.077	-.117*	.066*	-.307
46	F under 5 Yrs/F 1940	.260	-.223	-.253	-.365	-.241	-.344	....	....	....	....	....	....	....	....	-.063	.084	.048*	-.156*	-.193
47	F under 5 Yrs/F 1960	.160	.184	.202	.145	.154	.117	.003	....	.111	-.104*	.100	-.094	.138	.163	.039	.071	-.007*	-.061*	-.340
62	Employ 8-11 M 1960	-.756	-.775	-.779	-.691	-.778	-.685	.296	....	-.768	.747*	-.768	-.750	-.790	-.811	-.452	-.393	-.455*	-.426*	.317
63	Employ 8-11 F 1960	-.741	-.724	....	....	....	....	.345	....	-.686	.740*	-.676	-.705	-.683	-.738	-.363	-.299	-.420*	-.442*	.345
Labor force participation																				
58	EcAct F 10+ 1940	.415	.317	.420	.505	.318	.387	-.267	....	.296	-.383*	.365	.413	.386	.346	.389	.325	.199*	.432*	.006
59	EcAct F 12+ 1960	.223	.093	.301	.250	.127	.109	-.215	....	.158	-.218*	.229	.229	.221	.167	.264	.250	.173*	.285*	-.035
60	EcAct F 1960-1940	-.162	-.232	....	....	....	....	....	....	-.090	.088*	-.079	-.133	-.149	-.159	-.092	-.048	.085*	-.054*	-.025
61	Devel. Index 1950	.818	.754	.795	.810	.815	.775	....	....	.701	-.784*	.802	.818	.741	.742	....	....	....	....	....

	Literacy 10+ Yrs.		Literacy 40+ Yrs.				Literacy 6+0 School		Literacy of Youth 10-14 Yrs.						Changes in Literacy of Youth 10-14 Yrs.				Literacy 6+ Yrs
	T		M	F	M	F	M	F*	M	F*	M	F	M	F	M	F	M*	F*	
	1940	1960	1940		1960		1940		1930		1940		1960		1940-1930		1960-1940		1960-1950/ 1960-1940
Variable Number	140	141	145	146	147	148	153	154	155	156	157	158	159	160	161	162	163	164	165
White collar and professional workers																			
64 Collar/EcAct M 1940	.908	.839	.890	.876	.865	.818	-.502	....	.821	-.828*	.889	.904	.836	.828	.655	.676	.673*	.792*	-.395
65 Collar/EcAct M 1960	.839	.784	.811	.827	.810	.777	....	....	....	....	....	....	....	....	....	....	....	....	.....
66 Collar/EcAct M 1960-1940	.584	.566	....	....	....	....	-.336	....	.489	-.596*	.594	.615	.554	.567	.557	.437	.451*	.524*	.001
67 Collar/EcAct F 1940	.909	.894	.826	.886	.862	.892	....	....	....	....	....	....	....	....	.649	.600	.673*	.727*	-.451
68 Collar/EcAct F 1960	.798	.798	.723	.836	.762	.831	....	....	....	....	....	....	....	....	....	....	....	....	....
69 Collar/EcAct F 1960-1940	-.422	-.398	....	....	....	....	....	....	-.461	.392*	-.449	-.417	-.368	-.382	-.214	-.315	-.442*	-.358*	.542
70 Clerk/EcAct T 1960	.890	.830	....	....	....	....	-.458	....	.764	-.821*	.890	.911	.815	.816	.766	....	.717*	....	....
71 Clerk/EcAct M 1960	.886	.823	.838	.862	.836	.809	....	....	....	....	....	....	....	....	....	....	....	....	....
72 Clerk/EcAct F 1960	.884	.856	.805	.879	.839	.858	....	....	....	....	....	....	....	....	....	....	....	....	....
73 Prof/EcAct T 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
74 Prof/EcAct M 1960	.768	.692	.773	.750	.717	.686	-.263	....	.690	-.727*	.775	.777	.708	.704	.607	....	.623*	....	....
75 Prof/EcAct F 1960	.672	.759	.609	.678	.715	.759	....	....	.634	-.585*	.607	.650	.712	.746	....	....	....	....	....
Public administration																			
77 P.A./EcAct M 1940	....	....	....	....	....	....	-.371	....	.698	-.673*	.735	.727	.687	.659	.485	....	.564*	....	....
Agriculture																			
79 Ag/EcAct M 1940*	.871*	.847*	.839*	.860*	.880*	.851*	-.637*	....	.784*	-.790**	.816*	.846*	.825*	.829*	.565*	.523*	.515**	.646**	-.218*
80 Ag/EcAct M 1960*	.817*	.792*	.823*	.796*	.837*	.760*	-.536*	....	.737*	-.755**	.804*	.809*	.802*	.793*	.621*	.547*	.522**	.612**	-.151*
81 Ag/EcAct M 1960-1940	-.197	-.172	....	....	....	....	-.003	....	-.175	.229*	-.271	-.227	-.231	-.205	-.347	-.229	-.234*	-.184*	-.042
82 Ejidos/AgPop 1940	-.028	.042	-.003	-.075	.026	-.029	.130	....	.067	.077*	-.034	-.023	.079	.118	-.160	-.149	-.224*	-.261*	.345
83 Ag Labor/Ag M 1940	-.206	-.222	-.162	-.097	-.272	-.169	-.054	....	-.381	.245*	-.318	-.235	-.194	-.187	-.046	-.087	-.430*	-.241*	.240
84 Ag Labor/Ag M 1960	.340	.311	.382	.420	.315	.342	-.278	....	.206	-.414*	.258	.299	.316	.335	.225	.086	.048*	.147*	-.119
85 Ag Prop/Ag M 1940	.201	.182	.185	.157	.218	.143	.082	....	.235	-.205*	.292	.213	.200	.135	.281	.326	.362*	.287*	-.392
86 Ag Prop/Ag M 1960	-.326	-.292	-.360	-.414	-.293	-.334	.276	....	-.178	.407*	-.241	-.283	-.288	-.305	-.227	-.079	-.058*	-.159*	.133
87 Ag Prop/Ag M 1960-1940	-.363	-.322	....	....	....	....	....	....	-.283	.462*	-.345	-.332	-.330	-.309	-.280	-.176	-.241*	-.271*	.372

		Literacy 10+ Yrs.		Literacy 40+ Yrs.				Literacy 6+0 School	
		T		M	F	M	F	M	F*
		1940	1960	1940		1960		1940	
	Variable Number	140	141	145	146	147	148	153	154
88	Equip/Land 1950	.312	.362	.310	.348	.329	.368	....	....
89	Farm Mechanized 1950	.787	.752	.711	.824	.685	.787	-.418	....
91	Ag Inc under $500 1960*	.817*	.768*	.749*	.845*	.745*	.794*	-.383*	....
94	Returns Olick 1950-1930	.617	.546	....	....	....	....	....	....
	Manufacturing and mining								
96	Mfg/EcAct M 1940	.495	.488	.522	.494	.572	.490	....	....
97	Mfg/EcAct M 1960	.418	.418	.463	.376	.486	.358	....	....
98	Mfg/EcAct M 1960-1940	.154	.162	....	....	....	....	....	....
100	Mfg F/M+F Mfg 1940	-.298	-.336	-.435	-.199	-.419	-.209	....	....
101	Mfg F/M+F Mfg 1960	-.479	-.[illegible]38	-.529	-.390	-.564	-.425	....	....
103	Mfg Inc under $500 1960	[illegible]	[illegible]	-.772	-.772	-.724	-.705	-.323	....
105	Pay/Emp Fact 1[illegible]	....	....	....	....	....	....	....	....
106	Pay/Emp [illegible]	.278	.263	.208	.322	.206	.306	....	....
107	P[illegible]	....	....	....	....	....	....	-.216	....
10[illegible]	[illegible] 1955	.329	.340	.327	.355	.341	.373	....	....
	[illegible]mp Fact 1955/1940	.128	.051	....	....	....	....	....	....
111	Mining/EcAct M 1940	....	....	....	....	....	....	....	....

		Literacy of Youth 10-14 Yrs.						Changes in Literacy of Youth 10-14 Yrs.				Literacy 6+ Yrs
		M	F*	M	F	M	F	M	F	M*	F*	
		1930		1940		1960		1940-1930		1960-1940		1960-1950/ 1960-1940
	Variable Number	155	156	157	158	159	160	161	162	163	164	165
88	Equip/Land 1950	....	....	....	....	....	....	....	....	....	....	....
89	Farm Mechanized 1950	.598	-.771*	.710	.789	.719	.759	.639	.509	.441	.628*	-.146
91	Ag Inc under $500 1960*	.644*	-.813**	.773*	.810*	.711*	.735*	.672*	.606*	.613**	.718**	-.399*
94	Returns Olick 1950-1930	.515	-.557*	.612	.636	.568	.579	.576	.584	.480	.566	-.322
	Manufacturing and mining											
96	Mfg/EcAct M 1940	....	....	....	....	....	....	....	....	....	....	....
97	Mfg/EcAct M 1960	....	....	....	....	....	....	....	....	....	....	....
98	Mfg/EcAct M 1960-1940	....	....	....	....	....	....	.154	.140	.178*	.104*	.0[illegible]5
100	Mfg F/M+F Mfg 1940	....	....	....	....	....	....	....	....	....	....	....
101	Mfg F/M+F Mfg 1960	....	....	....	....	....	....	....	....	....	....	....
103	Mfg Inc under $500 1960	-.640	.758*	-.777	-.804	-.713	-.738	-.705	....	-.619*	....	....
105	Pay/Emp Fact 1[illegible]	.616	-.767*	.705	.660	.562	.568	....	....	....	....	....
106	Pay/Emp [illegible]	....	....	....	....	....	....	....	....	....	....	....
107	P[illegible]	.301	-.529*	.424	.443	.354	.387	.433	....	.385*	....	....
10[illegible]	[illegible] 1955	....	....	....	....	....	....	....	....	....	....	....
	[illegible]mp Fact 1955/1940	....	....	....	....	....	....	-.172	-.292	.054*	.074*	-.036
111	Mining/EcAct M 1940	.149	-.289*	.216	.319	.274	.339	....	....	....	....	....

		Urban Literacy by Age 1960						Rural Literacy by Age 1960									
		Males				Females				Males				Females			
		40-49	30-39	25-29	10-14	40-49*	30-39	25-29*	10-14	40-49	30-39	25-29	10-14	40-49	30-39	25-29*	10-14*
	Variable Number	168	169	170	173	176	177	178	181	184	185	186	189	192	193	194	197
Popuation distribution and change																	
1	Density 1940	-.678	....	-.500	-.672	.718*	....	.686*	-.636	-.333	....	-.474	-.439	-.524	....	.521*	.435*
2	Density 1960	-.649	....	-.448	-.648	.685*	....	.646*	-.606	-.331	....	-.427	-.378	-.477	....	.488*	.376*
4	Urban 1940	.462	....	.408	.508	-.572*	....	-.511*	.500	.641	....	.589	.624	.681	....	-.582*	-.626*
6	Urban 1960	.356	....	.433	.442	-.494*	....	-.503*	.453	.591	....	.515	.620	.638	....	-.516*	-.640*
8	Capital/Urban 1940	.428	....	.433	.458	-.350*	....	-.350*	.407	.172	....	.227	.204	.175	....	-.142*	-.130*
9	Capital/Urban 1960	.477	....	.482	.530	-.471*	....	-.447*	.466	.250	....	.283	.240	.304	....	-.278*	-.192*
10	Capital Size 1940	.208	....	.182	.187	-.125*	....	-.106*	.183	-.091	....	-.170	-.116	.002	....	.062*	.138*
11	Capital Size 1960	.323	....	.342	.336	-.304*	....	-.302*	.329	.048	....	-.040	.048	.185	....	-.096*	-.040*
12	Pop 50,000+ 1960	.557	....	.512	.556	-.558*	....	-.544*	.534	.429	....	.331	.398	.513	....	-.430*	-.454*
13	Urban 1960/1930	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
14	Urban 1960-1950/1960-1940	.243	....	.222	....	....	....	....	....	....	....	....	....	.408	....	....	....
15	Born Instate M 1940*	-.621*	....	.486*	.671*	-.633**	....	-.618**	.683*	.522*	....	.580*	.652*	.599*	....	-.564**	-.670**
17	Born Instate M 1960	-.501	....	-.478	-.513	.533*	....	.539*	-.516	-.458	....	-.499	-.567	-.495	....	.449*	.542*
Transportation																	
18	RR/Pop 1940	.076	.016	-.044	....	....	.064	....	....	....	....	....	....	-.033	....	....	....
23	Roads/Pop^B 1940	....	.572	....	....	-.627*	....	....	....	....	....	....	....	....	....	....	....
24	Roads/Pop 1960	....	.548	....	....	....	.599	....	....	....	....	....	....	....	....	....	....
26	Roads/Area^B 1940	-.235	-.175	-.179	-.111	.171*	-.189	.212*	-.089	.051	-.150	.035	.081	-.046	-.011	-.001*	.064*
27	Roads/Area 1960	-.552	-.501	-.257	-.492	.523*	-.520	.451*	-.453	-.131	-.150	-.198	-.133	-.280	-.256	.256*	.148*
28	Roads Paved/Roads 1960	.122	.116	.177	....	....	.196	....	....	....	....	....	....	.253	....	....	....
29	Bicycles/Pop 1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
30	Bicycles/Pop 1960	.185	....	.155	....	....	....	....	....	....	....	....	....	.100	....	....	....
31	Bicycles/Pop 1960-1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
32	Autos/Pop 1940	.622	....	.506	.635	-.701*	....	-.635*	.639	.544	....	.462	.549	.657	....	-.594*	-.598*
33	Autos/Pop 1960	.593	....	.685	.650	-.712*	....	-.760*	.643	.627	....	.544	.647	.702	....	-.631*	-.678*
34	Autos/Pop 1960/1939	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
35	Autos/Pop 1960-1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

		Urban Literacy by Age 1960								Rural Literacy by Age 1960							
		Males				Females				Males				Females			
		40-49	30-39	25-29	10-14	40-49*	30-39	25-29*	10-14	40-49	30-39	25-29	10-14	40-49	30-39	25-29*	10-14*
	Variable Number	168	169	170	173	176	177	178	181	184	185	186	189	192	193	194	197
Utility and communication facilities																	
36	Elect/Capita 1940	.126	....	.291	.212	-.308*	....	-.333*	.222	.243	....	.100	.204	.372	....	-.351*	-.299*
37	Elect/Capita 1960	.428	....	.390	.477	-.579*	....	-.523*	.459	.509	....	.419	.459	.574	....	-.591*	-.499*
38	Elect/Capita 1960-1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
39	Movies/Pop 1940	.659	....	.622	.679	-.653*	....	-.682*	.657	.480	....	.502	.617	.562	....	-.452*	-.586*
40	Movies/Pop 1960	.424	....	.482	.561	-.561*	....	-.578*	.602	.389	....	.337	.445	.592	....	-.526*	-.503*
41	Movies/Pop 1960-1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
42	Library Use 1940	.025	....	.102	....	....	....	....	....	....	....	....	....	.349	....	....	....
43	Running Water 1960	.119	.148	.306	.290	-.321*	.234	-.347*	.280	.303	.279	.222	.308	.452	....	-.415*	-.368*
44	Radio 1960	.583	....	.560	.668	-.726*	....	-.708*	.674	.712	....	.645	.750	.813	.423	-.745*	-.794*
Marriage and fertility rates																	
45	Single F 20-24 1960	.075	....	.108	.238	-.304*	....	-.222*	.246	.274	....	.171	.220	.458	....	-.398*	-.306*
46	F under 5 Yrs/F 1940	.111	....	-.072	-.099	.124*	....	.076*	-.105	-.127	....	-.029	-.102	-.303	....	.207*	.150*
47	F under 5 Yrs/F 1960	.335	....	.095	.214	-.264*	....	-.190*	.216	.230	....	.347	.202	.184	....	-.217*	-.173*
62	Employ 8-11 M 1960	-.512	-.536	-.432	-.633	.618*	-.602	.601	-.626	-.777	....	-.750	-.806	-.696	....	.723*	-.811*
63	Employ 8-11 F 1960	-.490	-.483	-.256	-.601	.654*	-.606	.499	-.606	....	....	-.649	-.645	-.716	....	.675*	.680*
Labor force participation																	
58	EcAct F 10+ 1940	.178	....	.490	.331	-.288*	....	-.389*	.335	.134	....	.081	.230	.302	....	-.205*	-.225*
59	EcAct F 12+ 1960	.025	....	.357	.148	-.097*	....	-.259*	.128	.032	....	-.028	.205	.090	....	-.051*	-.211*
60	EcAct F 1960-1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
61	Devel. Index 1950	.615	....	.588	.654	-.684*	....	-.682*	.625	.596	....	.512	.621	.657	....	-.564*	-.649*

	Urban Literacy by Age 1960								Rural Literacy by Age 1960									
	Males				Females				Males				Females					
	40-49	30-39	25-29	10-14	40-49*	30-39	25-29*	10-14	40-49	30-39	25-29	10-14	40-49	30-39	25-29*	10-14*		
Variable Number	168	169	170	173	176	177	178	181	184	185	186	189	192	193	194	197		
White collar and professional workers																		
64 Collar/EcAct M 1940	.764	....	.722	.781	-.788*	....	-.795*	.766	.649	....	.663	.720	.700	....	-.638*	-.670*		
65 Collar/EcAct M 1960	.670	....	.715	.713	-.685*	....	-.733*	.711	.569	....	.509	.625	.632	....	-.525*	-.608*		
66 Collar/EcAct M 1960-1940	.406	....	.511	....	....	....	....	....	....	....	....	....	.440	....	....	....		
67 Collar/EcAct F 1940	.749	....	.574	.802	-.880*	....	-.822*	.805	.728	....	.733	.766	.835	....	-.800*	-.773*		
68 Collar/EcAct F 1960	.579	....	.519	.679	-.715*	....	-.673*	.712	.595	....	.525	.608	.749	....	-.670*	-.668*		
69 Collar/EcAct F 1960-1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....		
70 Clerk/EcAct T 1960	.785	....	.777	....	....	....	....	....	....	....	....	....	.687	....	....	....		
71 Clerk/EcAct M 1960	.786	....	.781	.803	-.785*	....	-.834*	.791	.603	....	.582	.677	.672	....	-.594*	-.654*		
72 Clerk/EcAct F 1960	.796	....	.701	.834	-.835*	....	-.832*	.835	.631	....	.604	.674	.741	....	-.675*	-.690*		
73 Prof/EcAct T 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....		
74 Prof/EcAct M 1960	.524	....	.638	.599	-.616*	....	-.699*	.604	.547	....	.496	.621	.589	....	-.530*	-.634*		
75 Prof/EcAct F 1960	.356	....	.277	.477	-.601*	....	-.509*	.506	.718	....	.695	.658	.774	....	-.756*	-.678*		
Public administration																		
77 P.A./EcAct M 1940	.599	....	.646	....	....	....	....	....	....	....	....	....	.533	....	....	....		
Agriculture																		
79 Ag/EcAct M 1940*	.690*	....	.580*	.732*	-.772*	....	-.706*	.704*	.704*	....	.661*	.702*	.770*	....	-.689**	-.701**		
80 Ag/EcAct M 1960*	.580*	....	.640*	.620*	-.627*	....	-.671*	.611*	.663*	....	.588*	.695*	.661*	....	-.567**	-.681**		
81 Ag/EcAct M 1960-1940	.003	....	-.220	....	....	....	....	....	....	....	....	....	-.036	....	....	....		
82 Ejidos/Ag Pop 1940	-.103	....	-.099	-.072	.124*	....	.080*	-.025	.085	....	.070	.139	-.042	....	.057*	-.107*		
83 Ag Labor/Ag M 1940	-.061	....	-.085	.014	.112*	....	.116*	.038	-.333	....	-.302	-.276	-.165	....	.187*	.194*		
84 Ag Labor/Ag M 1960	.176	....	.330	.285	-.297*	....	-.346*	.303	.251	....	.146	.257	.360	....	-.319*	-.332*		
85 Ag Prop/Ag M 1940	.139	....	.164	.129	-.187*	....	-.191*	.062	.260	....	.233	.239	.190	....	-.243*	-.157*		
86 Ag Prop/Ag M 1960	-.167	....	-.337	-.264	.295*	....	.348*	-.282	-.229	....	-.127	-.228	-.355	....	.316*	.311*		
87 Ag Prop/Ag M 1960-1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....		

		Urban Literacy by Age 1960								Rural Literacy by Age 1960							
		Males				Females				Males				Females			
		40-49	30-39	25-29	10-14	40-49*	30-39	25-29*	10-14	40-49	30-39	25-29	10-14	40-49	30-39	25-29*	10-14*
	Variable Number	168	169	170	173	176	177	178	181	184	185	186	189	192	193	194	197
88	Equip/Land 1950	.189	....	.072	.235	-.318*	....	-.227*	.252	.389	....	.290	.336	.474	....	-.446*	-.447*
89	Farm Mechanized 1950	.626	....	.556	.704	-.741*	....	-.729*	.734	.517	....	.530	.603	.743	....	-.675*	-.680*
91	Ag Inc under $500 1960*	.687*	....	.623*	.754*	-.805*	....	-.773*	.743*	.579*	....	.589*	.621*	.742*	....	-.706**	-.640**
94	Returns Glick 1950-1930	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Manufacturing and mining																
96	Mfg/EcAct M 1940	.188	....	.274	.242	-.278*	....	-.268*	.204	.479	....	.366	.419	.441	....	-.330*	-.441*
97	Mfg/EcAct M 1960	.228	....	.371	.213	-.204*	....	-.280*	.207	.400	....	.266	.403	.285	....	-.180*	-.395*
98	Mfg/EcAct M 1960-1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
100	Mfg F/M+F Mfg 1940	-.015	....	.140	-.002	.078*	....	.004*	.003	-.592	....	-.534	-.487	-.298	....	.333*	.470*
101	Mfg F/M+F Mfg 1960	-.409	....	-.192	-.340	.387*	....	.340*	-.353	-.595	....	-.588	-.543	-.430	....	.406*	.532*
103	Mfg Inc under $500 1960	-.706	....	-.698	-.746	.744*	....	.792*	-.747	-.563	....	-.546	-.649	-.640	....	.610*	.656*
105	Pay/Emp Fact 1930	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
106	Pay/Emp Fact 1940	.515	....	.228	.498	-.444*	....	-.328*	.509	.113	....	.072	.159	.292	....	-.238*	-.223*
107	Pay/Emp Fact 1950	.342	....	.270	....	....	....	....	....	....	....	....	....	.437	....	....	....
108	Pay/Emp Fact 1955	.331	....	-.276	.298	-.390*	....	-.041*	.334	.336	....	.330	.262	.400	....	-.432*	-.276*
109	Pay/Emp Fact 1955/1940	-.198	....	-.350	....	....	....	....	....	....	....	....	....	.159	....	....	....
111	Mining/EcAct M 1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

		Age Differences in Literacy 1960								Male-Female Differences in Literacy by Age 1960							
		Urban				Rural				Urban				Rural			
		Males		Females		Males		Females									
		(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	40-49	25-29	20-24	10-14	40-49	25-29	20-24	10-14
	Variable Number	198	199	200	201	202	203	204	205	208	210	211	213	218	220	221	223
Population distribution and change																	
1	Density 1940	....	....	....	....	....	....	....	....	.456	.541	.415	.328	.490	.299	....	.199
2	Density 1960	.434	....	.590	....	-.287	....	.392	....	.440	.544	.390	.283	.469	.277	.384	.180
4	Urban 1940	-.184	-.007	-.576	.283	.117	.445	-.295	.635	-.621	-.424	-.401	-.337	-.463	-.480	-.451	-.441
6	Urban 1960	....	....	....	....	....	....	....	....	-.571	-.446	-.427	-.375	-.445	-.521	-.450	-.477
8	Capital/Urban 1940	-.173	....	-.296	....	.169	....	-.143	....	-.233	-.090	-.189	-.107	-.110	.065	-.007	.070
9	Capital/Urban 1960	....	....	....	....	....	....	....	....	-.363	-.200	-.254	-.096	-.251	-.084	-.182	-.022
10	Capital Size 1940	-.019	....	-.159	....	-.169	....	-.266	....	-.150	-.123	-.019	-.120	-.114	-.183	-.117	.070
11	Capital Size 1960	....	....	....	....	....	....	....	....	-.290	-.291	-.162	-.215	-.280	-.345	-.254	-.042
12	Pop 50,000+ 1960	-.272	-.086	-.508	.410	-.050	.540	-.390	.511	-.410	-.374	-.209	-.309	-.415	-.470	-.390	-.267
13	Urban 1960/1930	-.032	-.206	-.084	.112	.431	.051	.098	.064	-.151	....	-.284	....	-.183	....	-.092	....
14	Urban 1960-1950/1960-1940	-.123	-.047	-.471	.180	-.138	.028	-.424	.189	-.380	....	-.215	....	-.319	....	-.424	....
15	Born Instate 1940*	-.307*	-.134*	-.462*	.364*	.470*	.273*	-.059*	.467*	-.492*	-.500*	.639*	-.547*	-.459*	....	-.406*	-.458*
17	Born Instate 1960	....	....	....	....	....	....	....	....	.360	.296	....	.394	.347	....	.233	.203
Transportation																	
18	RR/Pop 1940	-.073	....	.109	....	.256	....	.277	....	.032	....	-.061	....	.033	....	.155	....
23	Roads/Pop^{B} 1940	....	....	....	....	....	....	....	....	....	....	-.528	....	....	....	-.456	....
24	Roads/Pop 1960	....	....	....	....	....	....	....	....	....	....	-.491	....	....	....	-.432	....
26	Roads/Area^{B} 1940	....	....	....	....	....	....	....	....	....	....	-.165	....	....	....	.064	....
27	Roads/Area 1960	....	....	....	....	....	....	....	....	....	....	.167	....	....	....	.212	....
28	Roads Paved/Roads 1960	.129	....	-.235	....	.069	....	-.071	....	-.298	....	-.223	....	-.196	....	-.135	....
29	Bicycles/Pop 1940	-.244	.017	-.245	.099	.161	.223	.041	.418	-.237	....	-.236	....	-.071	....	.009	....
30	Bicycles/Pop 1960	-.209	....	-.152	....	.131	....	.097	....	-.188	....	-.151	....	.002	....	.082	....
31	Bicycles/Pop 1960-1940	-.185	.112	-.100	.206	.189	.140	.139	.391	-.167	....	-.144	....	-.008	....	.055	....
32	Autos/Pop 1940	-.314	-.116	-.636	.306	.092	.385	-.362	.513	-.570	-.494	-.501	-.485	-.537	-.565	-.524	-.393
33	Autos/Pop 1960	....	....	....	....	....	....	....	....	-.581	-.545	-.521	-.445	-.519	-.547	-.558	-.387
34	Autos/Pop 1960/1939	.124	-.093	.224	.072	.320	-.143	.282	-.152	.138	....	.003	....	.194	....	.174	....
35	Autos/Pop 1960-1940	.041	-.110	-.285	.042	.171	-.024	-.052	.254	-.352	....	-.378	....	-.268	....	-.445	....

		Age Differences in Literacy 1960								Male-Female Differences in Literacy by Age 1960							
		Urban				Rural				Urban				Rural			
		Males		Females		Males		Females									
		(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	40-49	25-29	20-24	10-14	40-49	25-29	20-24	10-14
	Variable Number	198	199	200	201	202	203	204	205	208	210	211	213	218	220	221	223
Utility and communication facilities																	
36	Elect/Capita 1940	.127	-.091	-.345	-.033	-.163	-.005	-.383	.057	-.384	-.265	-.299	-.202	-.384	-.467	-.450	-.270
37	Elect/Capita 1960	....	....	....	....	....	....	....	....	-.464	-.335	-.328	-.270	-.429	-.453	-.487	-.226
38	Elect/Capita 1960-1940	-.153	.016	-.377	.216	-.141	.273	-.188	.401	-.351	....	-.216	....	-.299	....	-.437	....
39	Movies/Pop 1940	-.332	-.181	-.509	.352	.474	.456	-.228	.618	-.494	-.481	-.396	-.395	-.443	-.297	-.300	-.255
40	Movies/Pop 1960	.025	....	-.463	....	.212	....	-.275	....	-.668	-.596	-.606	-.597	-.608	-.737	-.685	-.593
41	Movies/Pop 1960-1940	.314	-.039	-.036	-.086	-.120	-.099	-.059	-.146	-.224	....	-.235	....	-.237	....	-.397	....
42	Library Use 1940	.349	-.238	-.286	-.218	-.011	.062	-.365	.147	-.437	....	-.241	....	-.398	....	-.335	....
43	Running Water 1960	.294	....	-.328	....	.048	....	-.295	....	-.446	-.325	....	-.169	-.457	-.603	-.492	-.325
44	Radio 1960	-.175	-.093	-.619	.317	.245	.402	-.267	.660	-.677	-.604	-.546	-.516	-.617	-.718	-.707	-.549
Marriage and fertility rates																	
45	Single F 20-24 1960	.131	....	-.402	....	-.219	....	-.355	....	-.540	-.409	-.315	-.214	-.504	-.641	-.646	-.550
46	F under 5 Yrs/F 1940	....	....	....	....	....	....	....	....	.448	.156	.155	.098	.399	.444	.344	.335
47	F under 5 Yrs/F 1960	-.441	....	-.159	....	.105	....	.079	....	-.044	-.104	-.183	-.166	-.057	.079	-.042	-.114
Employment of youth																	
62	Employ 8-11 M 1960	.202	.051	.499	-.310	-.249	-.320	-.026	-.481	.507	.479	.587	.431	.326	.458	.502	.460
63	Employ 8-11 F 1960	.251	.020	.626	-.309	-.067	-.307	.203	-.555	.654	....	.584	....	.497	....	.561	....
Labor force participation																	
58	EcAct F 10+ 1940	.242	-.372	-.239	-.103	.201	-.053	-.205	.132	-.401	-.248	.257	-.262	-.389	-.354	....	-.208
59	EcAct F 12+ 1960	.221	-.414	.006	-.353	.332	-.326	.045	-.035	-.043	-.031	.204	-.019	-.126	-.079	....	.076
60	EcAct F 1960-1940	.122	-.285	.299	-.455	.130	-.403	.308	-.287	....	....	-.015	....	....	....	....	....
61	Devel. Index 1950	....	....	....	....	....	....	....	....	-.554	-.496	....	-.352	-.474	-.467	....	-.347

		Age Differences in Literacy 1960								Male-Female Differences in Literacy by Age 1960							
		Urban				Rural				Urban				Rural			
		Males		Females		Males		Females									
		(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	40-49	25-29	20-24	10-14	40-49	25-29	20-24	10-14
	Variable Number	198	199	200	201	202	203	204	205	208	210	211	213	218	220	221	223
White collar and professional workers																	
64	Collar/EcAct M 1940	-.404	-.191	-.654	.459	.383	.460	-.243	.636	-.612	-.537	....	-.505	-.489	-.413	....	-.343
65	Collar/EcAct M 1960	....	....	....	....	....	....	....	....	-.576	-.527	....	-.517	-.461	-.489	....	-.368
66	Collar/EcAct M 1960-1940	-.030	-.137	-.333	.217	.069	.323	-.127	.354	-.420	....	....	....	-.339	....	....	....
67	Collar/EcAct F 1940	-.390	-.080	-.770	.460	.318	.484	-.336	.625	-.726	-.786	....	-.605	-.639	-.641	....	-.538
68	Collar/EcAct F 1960	....	....	....	....	....	....	....	....	-.721	-.700	....	-.649	-.644	-.770	....	-.642
69	Collar/EcAct F 1960-1940	.430	-.028	.391	-.329	-.339	-.269	.127	-.283	....	....	....	....	....	....	....	....
70	Clerk/EcAct T 1960	-.386	-.204	-.653	.429	.337	.477	-.259	.616	-.590	....	....	....	-.516	....	....	....
71	Clerk/EcAct M 1960	....	....	....	....	....	....	....	....	-.572	-.588	....	-.536	-.493	-.469	....	-.331
72	Clerk/EcAct F 1960	....	....	....	....	....	....	....	....	-.656	-.700	....	-.615	-.586	-.613	....	-.472
73	Prof/EcAct T 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
74	Prof/EcAct M 1960	-.195	....	-.533	....	.282	....	-.142	....	-.517	-.502	....	-.463	-.409	-.436	....	-.339
75	Prof/EcAct F 1960	....	....	....	....	....	....	....	....	-.743	-.624	....	-.483	-.540	-.629	....	-.646
Public administration																	
77	P.A. M/EcAct 1940	-.311	....	-.446	....	.444	....	-.104	....	-.429	....	....	....	-.317	....	....	....
Agriculture																	
79	Ag/EcAct M 1940*	-.379*	-.033*	.120*	.516*	-.735*	.425*	-.357*	.727*	-.691*	-.534*	-.506*	-.412*	-.550*	-.524*	-.580*	-.458*
80	Ag/EcAct M 1960*	-.231*	-.071*	.184*	.367*	-.529*	.322*	-.171*	.551*	-.541*	-.451*	-.467*	-.418*	-.400*	-.441*	-.479*	-.353*
81	Ag/EcAct M 1960-1940	-.175	.111	-.186	.135	-.158	.109	-.239	.131	....	....	....	....	....	....	-.059	....
82	Ejidos/Ag Pop 1940	.118	.242	.141	-.165	.199	-.051	.380	-.057	....	....	....	....	....	....	.067	....
83	Ag Labor/Ag M 1940	.106	-.051	-.110	-.313	.168	-.039	.061	-.189	.038	.055	....	-.117	-.104	-.065	-.082	-.182
84	Ag Labor/Ag M 1960	.107	-.097	-.053	.013	-.206	.060	-.118	.130	-.328	-.234	....	-.291	-.351	-.438	-.433	-.352

		Age Differences in Literacy 1960								Male-Female Differences in Literacy by Age 1960							
		Urban				Rural				Urban				Rural			
		Males		Females		Males		Females									
		(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	(15-19)-(40-49)	(40-49)-(60+)	40-49	25-29	20-24	10-14	40-49	25-29	20-24	10-14
	Variable Number	198	199	200	201	202	203	204	205	208	210	211	213	218	220	221	223
85	Ag Prop/Ag M 1940	-.119	-.097	.210	.341	-.181	.037	-.125	.158	.013	-.005	....	.210	-.030	-.056	-.061	.304
86	Ag Prop/Ag M 1960	-.108	.086	.056	-.009	.212	-.059	.156	-.115	.322	.222	....	.275	.370	.440	.435	.336
87	Ag Prop/Ag M 1960-1940	-.100	.211	-.030	-.157	.255	-.010	.198	-.132	....	....	....	....	....	....	....	....
88	Equip/Land 1950	....	....	....	....	....	....	....	....	-.330	-.324	....	-.247	-.393	-.533	....	-.484
89	Farm Mechanized 1950	-.222	-.081	.324	.398	-.591	.380	-.302	.585	-.682	-.705	....	-.653	-.728	-.723	-.701	-.671
91	Ag Inc under $500 1960*	-.256*	-.189*	.304*	.432*	-.648*	.383*	-.373*	-.555*	-.625*	-.609*	-.523*	-.504*	-.650*	-.604*	-.626*	-.432*
94	Returns Glick 1950-1930	-.362	-.147	.527	.271	-.364	.338	.005	-.429	....	....	....	....	....	....	....	....
Manufacturing																	
96	Mfg/EcAct M 1940	....	....	....	....	....	....	....	....	-.365	-.128	....	-.004	-.222	-.257	....	-.254
97	Mfg/EcAct M 1960	....	....	....	....	....	....	....	....	-.190	-.098	....	-.127	-.032	-.157	....	-.154
98	Mfg/EcAct M 1960-1940	-.185	.034	.041	.130	-.021	.146	.276	.094	....	....	....	....	....	....	....	....
100	Mfg F/M+F Mfg 1940	....	....	....	....	....	....	....	....	.044	.006	....	-.020	.177	-.039	....	.175
101	Mfg F/M+F Mfg 1960	....	....	....	....	....	....	....	....	.263	.306	....	.310	.061	.099	....	.394
103	Mfg Inc under $500 1960	.351	....	.555	....	-.324	....	.179	....	.498	.563	....	.552	.485	.480	.535	.377
105	Pay/Emp Fact 1930	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
106	Pay/Emp Fact 1940	....	....	....	....	....	....	....	....	-.269	-.359	....	-.416	-.396	-.384	....	-.256
107	Pay/Emp Fact 1950	-.118	....	-.367	....	-.029	....	-.270	....	....	....	....	....	....	....	-.446	....
108	Pay/Emp Fact 1955	....	....	....	....	....	....	....	....	-.324	-.272	....	-.382	-.322	-.402	....	-.249
109	Pay/Emp Fact 1955/1940	.126	-.075	-.072	-.262	-.196	-.440	-.254	.036	....	....	....	....	....	....	....	....

		Adult Levels						of Schooling									
		No Schooling Adults Age				7+ Years Adults		of School Age		10+ Years of School Adult Age				Bac Adults Age		Univ Adults Age	
		25+ 1950		30+ 1960		25+ 1950		30+ 1960		25+ 1950		30+ 1960		15+ 1940			
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	Variable Number	226	227	228	229	236	237	238	239	240	241	242	243	248	249	250	251
Population distribution and change																	
1	Density 1940	.579	.562	.566	.586	-.565	-.447	-.513	-.397	-.510	-.337	-.483	-.322	-.021	.236	-.380	-.365
2	Density 1960	.478	.475	.491	.532	-.463	-.375	-.431	-.336	-.405	-.263	-.399	-.264	-.005	.248	-.318	-.290
4	Urban 1940	-.738	-.673	-.731	-.755	.774	.799	.775	.807	.792	.807	.774	.829	.659	.578	.760	.739
6	Urban 1960	-.720	-.655	-.713	-.732	.807	.801	.802	.808	.831	.802	.808	.818	.584	.603	.749	.752
8	Capital/Urban 1940	-.322	-.183	-.297	-.271	.428	.339	.396	.320	.451	.358	.434	.355	.489	.177	.464	.356
9	Capital/Urban 1960	-.376	-.271	-.359	-.363	.451	.403	.444	.396	.471	.391	.474	.425	.425	.126	.440	.358
10	Capital Size 1940	-.016	-.082	-.045	-.112	.142	.312	.243	.368	.187	.390	.264	.428	.516	.635	.452	.435
11	Capital Size 1960	-.230	-.284	-.235	-.301	.357	.472	.434	.507	.397	.517	.450	.536	.483	.599	.561	.578
12	Pop 50,000+ 1960	-.642	-.583	-.606	-.586	.665	.726	.673	.726	.646	.699	.655	.718	.481	.557	.745	.770
13	Urban 1960/1930	....	....	....	....	....	....	.454	.328	....	....	....	....	....	....	....	....
14	Urban 1960-1950/1960-1940	....	....	-.295	....	.173	....	.240	.254	....	....	.248	....	....	....	....	....
15	Born Instate 1940*	-.715*	-.691*	-.684*	-.691*	.734*	.692*	.669*	.650*	.700*	.647*	.645*	.606*	.451*	.278*	.631*	.708*
17	Born Instate 1960	.719	.633	.642	.573	-.722	-.584	-.647	-.544	-.701	-.540	-.640	-.510	-.253	-.039	-.503	-.565
Transportation																	
18	RR/Pop 1940	....	....	-.062	....	.154	....	.071	....	....	....	.031	....	....	....	....	....
23	Roads/Pop^B 1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
24	Roads/Pop 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
26	Roads/Area^B 1940	-.042	.079	-.001	.032	.063	.120	.043	.130	.084	.182	.066	.190	.174	.211	.001	-.001
27	Roads/Area 1960	.290	.362	.304	.351	-.314	-.258	-.253	-.191	-.251	-.172	-.218	-.114	.036	.167	-.338	-.264
28	Roads Paved/Roads 1960	....	....	-.327	....	.452	....	.417	....	....	....	.412	....	....	....	....	....
29	Bicycles/Pop 1940	....	....	....	....	....	....	.436	.452	....	....	....	....	....	....	....	....
30	Bicycles/Pop 1960	....	....	-.149	....	.218	....	.168	....	....	....	.147	....	....	....	....	....
31	Bicycles/Pop 1960-1940	....	....	....	....	....	....	.079	.071	....	....	....	....	....	....	....	....
32	Autos/Pop 1940	-.771	-.735	-.735	-.734	.819	.877	.825	.874	.797	.826	.802	.840	.367	.413	.666	.772
33	Autos/Pop 1960	-.829	-.765	-.812	-.789	.894	.889	.912	.904	.876	.818	.899	.872	.368	.361	.664	.746
34	Autos/Pop 1960/1939	....	....	....	....	....	....	-.031	-.225	....	....	....	....	....	....	....	....
35	Autos/Pop 1960-1940	....	....	....	....	....	....	.648	.619	....	....	....	....	....	....	....	....

		Adult Levels						of Schooling									
		No Schooling Adults Age				7+ Years Adults		of School Age		10+ Years of School Adult Age				Bac Adults Age		Univ Adults Age	
		25+ 1950		30+ 1960		25+ 1950		30+ 1960		25+ 1950		30+ 1960		15+ 1940			
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	Variable Number	226	227	228	229	236	237	238	239	240	241	242	243	248	249	250	251
Utility and communication facilities																	
36	Elect/Capita 1940	-.350	-.423	-.315	-.346	.385	.537	.465	.608	.396	.524	.471	.629	.086	.305	.182	.366
37	Elect/Capita 1960	-.633	-.669	-.595	-.555	.552	.600	.609	.672	.537	.507	.605	.663	.038	.045	.261	.432
38	Elect/Capita 1960-1940	....	....	....	....	....	....	.524	.612	....	....	....	....	....	....	....	....
39	Movies/Pop 1940	-.735	-.644	-.721	-.706	.826	.710	.784	.682	.813	.669	.769	.648	.525	.282	.778	.748
40	Movies/Pop 1960	-.585	-.639	-.564	-.682	.661	.691	.698	.722	.705	.653	.718	.738	.332	.498	.558	.623
41	Movies/Pop 1960-1940	....	....	....	....	....	....	.093	.181	....	....	....	....	....	....	....	....
42	Library Use 1940	....	....	-.261	....	.334	....	.413	.543	....	....	.433	....	....	....	....	....
43	Running Water 1960	-.416	-.462	-.399	-.462	.452	.521	.535	.598	.490	.543	.557	.639	.418	.552	.459	.560
44	Radio 1960	-.839	-.804	-.853	-.871	.814	.852	.861	.882	.801	.773	.852	.860	.455	.459	.690	.791
Marriage and fertility rates																	
45	Single F 20-24/F 1960	-.190	-.304	-.239	-.399	.195	.421	.300	.484	.201	.366	.311	.503	.297	.478	.230	.391
46	F under 5 Yrs/F 1940	.176	.234	.150	.277	-.274	-.348	.332	-.410	-.361	-.383	-.393	-.493	-.302	-.475	-.250	-.315
47	F under 5 Yrs/F 1960	-.193	-.117	-.162	-.135	.059	-.019	-.037	-.095	-.017	-.124	-.082	-.184	-.169	-.461	-.084	-.032
Cultural characteristics																	
	Proportions of population walking barefoot																
125	Barefoot M 1940	.632	.671	.601	.780	-.588	-.717	-.575	-.688	-.570	-.632	-.572	-.670	-.438	-.472	-.584	-.734
128	Barefoot F 1940	....	....	.698	....	-.679	....	-.669	-.743	....	....	-.662	....	....	....	....	....
127	Barefoot M 1960	.656	.630	.645	.769	-.648	-.743	-.631	-.702	-.623	-.649	-.624	-.671	-.444	-.395	-.657	-.717
130	Barefoot F 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
123	Barefoot Urban T 1960	....	....	....	....	....	....	-.310	-.354	....	....	....	....	....	....	....	....
124	Barefoot Rural T 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

							Adult Levels	of Schooling									
		No Schooling Adults Age				7+ Years Adults		of School Age		10+ Years of School Adults Age				Bac Adults Age		Univ Adults Age	
		25+ 1950		30+ 1960		25+ 1950		30+ 1960		25+ 1950		30+ 1960		15+ 1940			
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	Variable Number	226	227	228	229	236	237	238	239	240	241	242	243	248	249	250	251
131	Barefoot M/F 1940	....	....	-.524	....	.474	....	.482	....	....	....	.458	....	....	....	....	....
132	Barefoot M/F 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
135	Barefoot M 1940-1960	....	....	.429	....	-.444	....	-.464	-.637	....	....	-.463	....	....	....	....	....
138	Barefoot F 1940-1960	....	....	....	....	....	....	-.572	-.693	....	....	....	....	....	....	....	....
113	Non-Catholic T 1940	....	....	-.227	....	.275	....	.179	....	....	....	.150	....	....	....	....	....
114	Non-Catholic T 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
43	Running Water 1960	-.416	-.462	-.339	-.462	.452	.521	.535	.598	.490	.543	.557	.639	.418	.552	.459	.560
115	Sleep on Floor 1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
116	Sleep on Bed 1940*	.608*	.681*	.579*	.671*	-.521*	-.581*	-.545*	-.588*	-.494*	-.487*	-.528*	-.547*	-.191*	-.243*	-.395*	-.610*
117	Non-wheat T 1940*	-.663*	-.660*	-.661*	-.640*	.719*	.631*	.759*	.672*	.749*	.666*	.772*	.689*	.455*	.460*	.564*	.584*
119	Non-wheat T 1960	.614	.611	.616	.581	-.723	-.572	-.750	-.586	-.747	-.560	-.763	-.572	-.337	-.204	-.513	-.503
122	Non-wheat T 1940-1960	....	....	.310	....	-.289	....	-.280	-.360	....	....	-.297	....	....	....	....	....

		Primary School Enrollments						Enrollment at 6 Years 1959				
		Total		Males	Urban	Rural	U-R	Monthly Income in Pesos			Occupation	
		1937	1960*	1930	1960	1960	1960	$200	$601 to $1,000	(601 to 1,000)-(200)	Ag	Prof
	Variable Number	265	266	267	273	274	275	278	280	282	283	284
Population distribution and change												
1	Density 1940	-.599	.375*	....	....	....	....	....	....	.....	.....	....
2	Density 1960	-.512	.336*	-.264	-.398	.066	-.308	.011	-.086	.325	-.302	-.111
4	Urban 1940	.339	-.404*	.631	-.099	.236	-.230	.076	.178	-.168	.399	.251
6	Urban 1960	.421	-.479*	....	....	....	....	....	....	....	....	....
8	Capital/Urban 1940	.223	-.239*	.391	.195	.184	-.002	.275	.446	.068	.573	.208
9	Capital/Urban 1960	.235	-.208*	....	....	....	....	....	....	....	....	....
10	Capital Size 1940	-.165	.246*	-.106	-.059	-.320	.132	.068	-.092	-.055	.074	-.200
11	Capital Size 1960	.069	.115*	....	....	....	....	....	....	....	....	....
12	Pop 50,000+ 1960	.301	-.087*	.315	-.132	.009	-.118	.116	.120	-.336	.301	.058
13	Urban 1960/1930	.593	-.385*	.407	-.155	.423	-.402	-.067	.048	-.160	-.013	.242
14	Urban 1960-1940	.207	-.162*	.202	.602	-.083	.487	.112	.160	-.023	.367	-.038
15	Born Instate M 1940*	.710*	-.489**	.554*	.027*	.445*	-.287*	....	.167*	-.167*	.189*	.254*
17	Born Instate M 1960	....	....	....	....	....	....	....	....	....	....	....
Transportation												
18	RR/Pop 1940	.025	-.007*	.104	-.485	.139	-.442	-.158	-.113	-.046	-.233	.089
23	Roads/Pop^B 1940	.501	-.281*	.470	.236	.068	....	-.057	.080	-.183	.203	.164
24	Roads/Pop 1960	.610	-.541*	....	....	....	....	....	....	....	....	....
26	Roads/Area^B 1940	-.015	-.144*	.313	-.056	.295	-.230	-.081	.101	.418	-.072	-.005
27	Roads/Area 1960	-.252	.031*	-.013	-.134	.303	-.272	.036	.143	.401	-.067	-.076
28	Roads Paved/Roads 1960	.106	-.227*	.312	-.265	.201	-.327	-.167	-.172	-.182	-.045	.047
29	Bicycles/Pop 1940	.099	-.265*	.461	-.184	.160	-.236	....	....	....	....	....
30	Bicycles/Pop 1960	-.010	-.208*	.411	-.099	.152	-.169	.118	.466	.277	.415	.322
31	Bicycles/Pop 1960-1940	-.021	-.163*	.354	-.098	.168	-.177	....	....	....	....	....
32	Autos/Pop 1940	.516	-.339*	.428	.200	.063	.091	-.146	.028	-.235	.160	.003
33	Autos/Pop 1960	.636	-.513*	....	....	....	....	....	....	....	....	....
34	Autos/Pop 1960/1939	.306	-.347*	.283	-.024	.447	-.314	....	....	....	....	....
35	Autos/Pop 1960-1940	.428	-.520*	.358	.299	.236	.058	....	....	....	....	....

		Primary School Enrollments						Enrollment at 6 Years 1959				
		Total		Males	Urban	Rural	U-R	Monthly Income in Pesos			Occupation	
		1937	1960*	1930	1960	1960	1960	$200	$601 to $1,000	(601 to 1,000)-(200)	Ag	Prof
	Variable Number	265	266	267	273	274	275	278	280	282	283	284
Utility and communication facilities												
36	Elect/Capita 1940	.190	-.062*	.109	.256	-.008	.190	-.018	-.127	-.116	-.031	-.306
37	Elect/Capita 1960	.403	-.262*	.308	.441	.054	....	-.074	-.067	-.261	.148	-.186
38	Elect/Capita 1960-1940	.254	-.251*	.184	.175	.054	.081	....	....	....	....	....
39	Movies/Pop 1940	.623	-.491*	.636	....	.269	-.195	.124	.354	-.264	.456	.311
40	Movies/Pop 1960	.514	-.475*	.357	.100	.215	-.097	-.087	.049	-.271	.199	.154
41	Movies/Pop 1960-1940	.061	-.064*	-.125	.059	.018	.022	....	....	....	....	....
42	Library Use 1940	.088	-.050*	.187	.015	-.042	.029	-.034	-.082	-.161	.032	-.097
43	Running Water 1960	.222	-.133*	.291	-.112	.068	-.145	-.127	-.059	-.093	.179	-.108
44	Radio 1960	.620	-.526*	.538	.157	.257	-.064	-.168	.144	-.211	.317	.089
Marriage and fertility rates												
45	Single F 20-24 1960	.021	-.038*	.040	.159	-.128	.204	-.158	.085	.036	.172	-.065
46	F under 5 Yrs/F 1940	.070	.038*	.117	.154	.184	....	.017	.060	-.061	.052	.160
47	F under 5 Yrs/F 1960	.269	-.125*	....	.154	.184	-.004	....	....	....	....	....
Employment of youth												
62	Employ 8-11 M 1960	-.651	.709*	-.678	-.315	-.571	.143	-.019	-.209	.203	-.442	-.162
63	Employ 8-11 F 1960	-.476	.457*	-.555	-.208	-.275	.025	.078	-.057	.221	-.242	-.219
Labor force participation												
58	EcAct F 10+ 1960	.350	-.265*	.288	.215	.120	.059	-.049	.178	.034	.226	-.082
59	EcAct F 12+ 1960	.395	-.213*	.178	.228	.175	.047	-.199	.264	.277	.107	-.131
60	EcAct F 1960-1940	.125	-.011*	-.032	.039	.081	-.014	-.238	.062	.280	-.134	-.242
61	Devel. Index 1950	.434	-.427*	.516	.129	.135	....	-.088	.106	-.211	.298	.078
White collar and professional workers												
64	Collar/EcAct M 1940	.713	-.634*	.680	.261	.319	-.041	-.001	.288	-.190	.466	.195
65	Collar/EcAct M 1960	....	....	....	....	....	....	....	....	....	....	....
66	Collar/EcAct M 1960-1940	.340	-.381	.356	-.069	.185	-.183	-.113	.070	-.183	.139	.003

		Primary School Enrollments						Enrollment at 6 Years 1959				
		Total		Males	Urban	Rural	U-R	Monthly Income in Pesos			Occupation	
		1937	1960*	1930	1960	1960	1960	$200	$601 to $1,000	(601 to 1,000)-(200)	Ag	Prof
	Variable Number	265	266	267	273	274	275	278	280	282	283	284
67	Collar/EcAct F 1940	.748	-.634*	.605	.338	.284	.046	....	....	....	....	....
68	Collar/EcAct F 1960	....	....	....	....	....	....	....	....	....	....	....
69	Collar/EcAct F 1960-1940	-.477	-.393*	-.380	-.330	-.211	-.099	-.145	-.114	.289	-.322	-.178
70	Clerk/EcAct T 1960	.711	-.607*	.569	.241	.252	-.014	-.098	.219	-.208	.398	.124
71	Clerk/EcAct M 1960	....	....	....	....	....	....	....	....	....	....	....
72	Clerk/EcAct F 1960	....	....	....	....	....	....	....	....	....	....	....
73	Prof/EcAct T 1960	....	....	....	....	....	....	....	....	....	....	....
74	Prof/EcAct M 1960	.687	-.607*	.574	.317	.326	.006	-.097	.233	-.085	.347	.147
75	Prof/EcAct F 1960	.402	-.574*	.549	.360	.289	....	.054	.198	-.161	.425	.246
Public administration												
77	P.A./EcAct M 1940	.694	-.635*	.634	.278	.395	-.074	-.005	.315	-.085	.425	.183
Agriculture												
79	Ag/EcAct M 1940*	.490*	-.484**	.619*	.211*	.184*	.023*	.003*	.247*	-.185*	.500*	.142*
80	Ag/EcAct M 1960*	.533*	-.569**	.621*	.129*	.338*	-.135*	-.013*	.262*	-.114*	.428*	.103*
81	Ag/EcAct M 1960-1940	-.234	.274*	-.210	.198	-.350	.374	-.004	-.098	-.003	-.013	-.057
82	Ejidos/Ag Pop 1940	-.015	-.301*	.137	.058	.291	-.130	-.067	-.074	.047	-.202	-.091
83	Ag Labor/Ag M 1940	-.137	.169*	-.342	-.009	-.064	.024	-.283	-.033	.278	-.254	-.059
84	Ag Labor/Ag M 1960	.274	-.170*	.138	.201	.162	.037	-.276	-.155	-.045	-.113	-.314
85	Ag Prop/Ag M 1940	.234	-.121*	.110	.130	.032	.075	.030	-.037	-.238	.289	-.054
86	Ag Prop/Ag M 1960	-.272	.138*	-.106	-.205	-.131	-.060	.274	.161	.046	.125	.319
87	Ag Prop/Ag M 1960-1940	-.354	.191*	-.190	-.245	-.144	-.079	.204	.169	.176	-.055	.308
88	Equip/Land 1950	....	....	....	....	....	....	....	....	....	....	....
89	Farm Mechanized 1950	.652	-.432*	.410	.101	.237	-.100	-.095	.119	-.249	.209	.140
91	Ag Inc under $500 1960*	.717*	-.493**	.445*	.316*	.176*	.091*	-.170*	.067*	-.335*	.272*	.088*
94	Returns Glick 1950-1930	.737	-.466*	.402	.067	.364	-.207	-.058	.222	-.195	.182	.348
Manufacturing and mining												
96	Mfg/EcAct M 1940	....	....	....	....	....	....	....	....	....	....	....
97	Mfg/EcAct M 1960	....	....	....	....	....	....	....	....	....	....	....
98	Mfg/EcAct M 1960-1940	.227	-.133*	.168	-.148	.192	-.237	....	....	....	....	....

		Primary School Enrollments						Enrollment at 6 Years 1959				
		Total		Males	Urban	Rural	U-R	Monthly Income in Pesos			Occupation	
		1937	1960*	1930	1960	1960	1960	$200	$601 to $1,000	(601 to 1,000)-(200)	Ag	Prof
	Variable Number	265	266	267	273	274	275	278	280	282	283	284
100	Mfg F/M+F Mfg 1940	....	....	....	....	....	....	....	....	....	....	....
101	Mfg F/M+F Mfg 1960	....	....	....	....	....	....	....	....	....	....	....
103	Mfg Inc under $500 1960	-.776	.579*	-.453	-.404	-.278	-.093	.211	-.120	.192	-.210	-.015
105	Pay/Emp Fact 1930	.502	-.320*	.444	.074	.246	....	.013	.000	-.440	.153	.018
106	Pay/Emp Fact 1940	....	....	....	....	....	....	....	....	....	....	....
107	Pay/Emp Fact 1950	.386	-.153*	.075	.168	-.015	.124	-.257	-.196	-.296	-.104	-.157
108	Pay/Emp Fact 1955	....	....	....	....	....	....	....	....	....	....	....
109	Pay/Emp Fact 1955/1940	-.082	.107*	.139	-.029	-.226	.143	....	....	....	....	....
111	Hiring/EcAct M 1940	.260	.016*	-.117	.387	-.245	....	-.155	-.102	-.181	.022	-.254
	Cultural characteristics											
	Proportions of pop. walking barefoot											
125	Barefoot M 1940	-.349	.106*	-.292	....	.039	-.003	....	....	....	....	....
128	Barefoot F 1940	-.455	.194*	-.346	-.073	-.025	-.016	....	....	....	....	....
127	Barefoot M 1960	-.333	.156*	-.354	.004	.112	-.048	.048	-.182	.254	-.318	-.343
130	Barefoot F 1960	-.387	.257*	....	....	....	....	....	....	....	....	....
123	Barefoot Urban T 1960	-.266	.088*	-.108	-.394	.236	-.407	-.063	-.286	.145	-.334	-.235
124	Barefoot Rural T 1960	-.394	.258*	....	....	....	....	....	....	....	....	....
131	Barefoot M/F 1940	.506	-.391*	.277	.330	.259	.073	-.038	-.108	-.357	.108	-.169
132	Barefoot M/F 1960	.460	-.355*	.290	.338	.052	....	.051	.066	-.398	.404	.167
135	Barefoot M 1940-1960	-.235	-.012*	-.147	-.085	.176	-.154	.016	-.021	.249	-.200	-.143
138	Barefoot F 1940-1960	-.321	.106*	-.198	-.156	.123	-.175	-.019	-.028	.383	-.281	-.149
113	Non-Catholic 1940	.431	-.366*	.321	.010	.341	-.232	.149	.211	-.101	.159	.213
114	Non-Catholic 1960	.531	-.482*	.400	-.107	.428	....	-.005	.029	-.083	.018	.108
43	Running Water 1960	.222	-.133*	.291	-.112	.068	-.145	-.127	-.059	-.093	.179	-.108
115	Sleep on Floor 1940	-.399	.546**	-.479	-.068	-.294	....	-.175	-.261	.232	-.357	-.376
116	Sleep on Bed 1940*	-.604*	.241	-.222*	-.142*	-.135*	.002*	-.116*	-.075*	.438*	-.221*	-.192*
117	Non-wheat T 1940*	.626*	-.629**	.626*	.072*	.395*	-.119*	-.150*	.014*	-.237*	.171*	.026*
119	Non-wheat T 1960	-.727	.673*	-.591	-.205	-.334	....	.179	-.138	.156	-.204	-.093
122	Non-wheat T 1940-1960	.010	.163*	-.323	.230	-.222	.311	-.007	.132	.265	.002	-.015

	Progress in School													
	Continuation Rates Based on Beginning of Year Enrollments													
	Grades 4/3								Grades 5/1				Secondary School Grades 3/1	
	1942			1960			1960-1942		1942		1960		1960	
	Urban	Rural	U-R	Urban*	Rural	U-R	Urban	Rural	Urban	Rural	Urban*	Rural	M	F
Variable Number	288	293	296	299	304	307	308	309	330	331	332	333	338	339
Labor force participation														
58 EcAct F 10+ 1940	....	.182	-.131	.125*	.141	-.172	-.112	-.030	.257	.272	-.277*	.282	.068	.009
59 EcAct F 12+ 1960	....	.495	-.299	-.176*	.422	-.352	-.159	-.042	.347	.323	-.479*	.374	-.038	-.170
60 EcAct F 1960-1940	....	.437	-.192	-.395*	.380	-.211	-.106	-.042	.296	.304	-.393*	.227	....	....
61 Devel. Index 1950	....	.450	-.352	....	.079	-.146	....	....	.735	.464	-.447*	.508	....	....
White collar and professional workers														
64 Collar/EcAct M 1940	....	.369	-.434	.214*	.040	-.135	-.125	-.316	.557	.172	-.486*	.427	.217	....
65 Collar/EcAct M 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....
66 Collar/EcAct M 1960-1940	....	.139	.046	.189*	-.063	.034	-.299	-.173	.499	.416	-.211*	.368	-.140	....
67 Collar/EcAct F 1940	....	....	-.515	.027*	....	....	-.018	-.307	....	....	....	....	....	....
68 Collar/EcAct F 1950	....	....	....	....	....	....	....	....	....	....	....	....	....	....
69 Collar/EcAct F 1960-1940	....	-.413	.619	.155*	-.156	.134	-.239	.247	-.181	.045	.326*	-.181	....	....
70 Clerk/EcAct T 1960	....	.349	-.339	.221*	.009	-.081	-.198	-.328	.660	.256	-.463*	.423	.131	....
71 Clerk/EcAct M 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....
72 Clerk/EcAct F 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....
73 Prof/EcAct T 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....
74 Prof/EcAct M 1960	....	.384	-.383	....	.136	-.200	-.146	-.232	.457	.263	-.292*	.511	.143	....
75 Prof/EcAct F 1960	....	.208	-.143	....	.054	.071	....	....	.313	.336	-.114*	.384	....	....
Public administration														
77 P.A./EcAct M 1940	....	.399	-.524	....	.143	-.194	.014	-.255	.379	.055	-.497*	.378	.231	....
Agriculture														
79 Ag/EcAct M 1940*		.434*	-.319*	.198**	.002*	-.095*	-.347*	-.391*	.643*	.349*	-.412**	.430*	.206*	....
80 Ag/EcAct M 1960*		.371*	-.231*	.104*	.049*	-.091*	-.276*	-.279*	.614*	.396*	-.452**	.495*	.042*	....
81 Ag/EcAct M 1960-1940	....	-.034	-.042	.067*	-.121	.074	-.038	-.120	-.157	-.238	.187*	-.304	.286	....

		Progress in School													
		Continuation Rates Based on						Beginning of Year Enrollments							
		Grades 4/3								Grades 5/1				Secondary School Grades 3/1	
		1942			1960			1960-1942		1942		1960		1960	
		Urban	Rural	U-R	Urban*	Rural	U-R	Urban	Rural	Urban	Rural	Urban*	Rural	M	F
	Variable Number	288	293	296	299	304	307	308	309	330	331	332	333	338	339
82	Ejidos/Ag Pop 1940	....	-.167	.214	-.025*	.029	-.059	.052	.256	-.188	-.066	-.011*	.064	-.193	....
83	Ag Labor/Ag M 1940	....	-.116	.205	.214*	-.149	.110	-.121	.001	-.172	-.127	.052*	-.129	.049	....
84	Ag Labor/Ag M 1960	....	.320	-.157	-.098*	.220	-.150	-.091	-.056	.243	.498	-.310*	.587	-.077	....
85	Ag Prop/Ag M 1940	....	.448	-.352	-.344*	.273	-.129	-.023	-.193	.404	.302	-.274*	.143	.176	....
86	Ag Prop/Ag M 1960	....	-.300	.160	.110*	-.203	.124	.072	.069	-.227	-.491	.296*	-.581	.091	....
87	Ag Prop/Ag M 1960-1940	....	-.510	.372	-.320*	-.368	.208	.008	.133	-.398	-.615	.411*	-.576	....	....
88	Equip/Land 1950	....	....	....	....	....	....	....	....	....	....	....	....	....	....
89	Farm Mechanized 1950	....	.282	-.278	.125*	.119	-.143	-.102	-.168	.544	.359	-.504*	.548	-.003	....
91	Ag Inc under $500 1960*	....	.413*	-.475*	.002**	.185*	-.162*	.037*	-.228*	.562*	.315*	-.547**	.541*	.105*	.121*
94	Returns Glick 1950-1930	....	.248	-.425	-.124*	.134	-.194	.127	-.106	.308	-.004	-.434*	.306	....	....
	Manufacturing and mining														
96	Mfg/EcAct M 1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....
97	Mfg/EcAct M 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....
98	Mfg/EcAct M 1960-1940	....	....	-.025	-.005*	....	....	-.211	-.181	....	....	....	....	....	....
100	Mfg F/M+F Mfg 1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....
101	Mfg F/M+F Mfg 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....
103	Mfg Inc under $500 1960	....	-.449	.447	....	-.149	.143	.061	.281	-.583	-.298	.528*	-.564	-.132	....
105	Pay/Emp Fact 1930	....	.520	-.558	....	.203	-.174	....	....	.572	.446	-.486*	.715	....	....
106	Pay/Emp Fact 1940	....	....	....	....	....	....	....	....	....	....	....	....	....	....
107	Pay/Emp Fact 1950	....	.486	-.312	....	.134	-.038	-.238	-.367	.524	.618	-.224*	.606	-.114	....
108	Pay/Emp Fact 1955	....	....	....	....	....	....	....	....	....	....	....	....	....	....
109	Pay/Emp Fact 1955/1940	....	....	-.312	-.023*	....	....	-.028	.126	....	....	....	....	....	....
111	Mining/EcAct M 1940	....	.469	-.207	....	-.003	.040	....	....	.405	.497	-.062*	.219	....	....

	Progress in School													
	Continuation Rates Based on						Beginning of Year Enrollments							
	Grades 4/3								Grades 5/1				Secondary School Grades 3/1	
	1942			1960			1960-1942		1942		1960		1960	
	Urban	Rural	U-R	Urban*	Rural	U-R	Urban	Rural	Urban	Rural	Urban*	Rural	M	F
Variable Number	288	293	296	299	304	307	308	309	330	331	332	333	338	339
Cultural characteristics														
Proportion of pop walking barefoot														
125 Barefoot M 1940	-.003	-.198	.183	-.330*	-.064	....	.196	.105	-.338	-.294	-.501*	.188	.023	-.167
128 Barefoot F 1940	....	-.238	.264	-.275*	-.086	....	.137	.134	....	....	....	....	-.041	....
127 Barefoot M 1960	-.041	-.230	.194	....	.022	.155	.333	.230	-.401	-.190	.139*	-.395	.038	.241
130 Barefoot F 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....
123 Barefoot Urban 1960	....	-.116	.261	-.487*	.304	-.127	.107	.385	-.047	.272	.027*	.045	....	....
124 Barefoot Rural 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....
131 Barefoot M/F 1940	....	.209	-.393	....	.102	-.044	.224	-.148	.407	.176	-.387*	.307	.281	....
132 Barefoot M/F 1960	....	.164	-.169	....	-.087	.045	....	....	.430	.164	-.169*	.210	....	....
135 Barefoot M 1940-1960	....	-.152	.075	-.356*	.040	.077	.284	.168	-.279	-.291	.058*	-.373	-.015	....
139 Barefoot F 1940-1960	....	-.102	.078	-.350*	.189	-.081	.269	.255	-.384	-.220	.116*	-.301	....	....
113 Non-Catholic T 1940	....	.045	-.350	....	-.156	.085	.276	-.190	-.023	-.389	-.196*	-.085	.397	....
114 Non-Catholic T 1960	....	.053	-.158	....	.116	-.131	....	....	.202	-.047	-.235*	.123	....	....
43 Running Water 1960	....	.229	-.004	....	.292	-.243	-.245	.054	.501	.622	-.293*	.375	-.194	....
115 Sleep on Floor 1940	....	.076	.259	....	.067	.047	....	....	-.040	.224	.053*	.044	....	....
116 Sleep on Bed 1940*	....	-.274*	.255*	....	-.108*	.046*	-.027*	.184*	-.486*	-.438*	.392**	-.589*	-.103*	....
117 Non-wheat T 1940*	....	.214*	-.279*	....	.260*	-.292*	-.025*	.123*	.470*	.372*	-.368**	.403*	-.016*	....
119 Non-wheat T 1960	....	-.255	.382	....	-.207	.257	....	....	-.407	-.197	.339*	-.293	....	....
122 Non-wheat T 1940-1960	....	-.020	.058	-.010*	-.185	.213	-.075	-.178	-.227	-.410	.111*	-.374	.224	....

		Age Grade Progress in School 1963														
		Males				Females				Pass Rates		Schools Incomplete				
		Age 10 Grade 1			Age 12 Grade 3+	Age 10 Grade 1			Age 12 Grade 3+	Grade 2 1960		1942		1960	1942-1960	
		Urban	Rural	R-U	Rural	Urban	Rural	R-U	Rural	Urban	Rural	Urban	Rural*	Total	Urban	Rural
	Variable Number	347	348	349	353	359	360	361	365	376	377	389	390	395	396	397
Transportation																
18	RR/Pop 1940	-.009	-.038	-.191	....	-.177	-.180	....	....	-.140	-.169	.120	-.028*	....	....	....
23	Roads/Pop^{B} 1940	-.548	-.582	....	....	-.525	-.621	....	....	.212	.260	....	....	....	....	....
24	Roads/Pop 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
26	Roads/Area^{C} 1940	-.053	-.203	-.147	.261	.033	-.127	-.206	.269	.178	.194	.166	.168*	-.338	.229	.162
27	Roads/Area 1960	.199	.144	.257	.079	.335	.261	.085	.066	.151	.146	.144	-.016*	-.000	.123	.081
28	Roads Paved/Roads 1960	-.286	-.116	-.256	....	-.274	-.303	....	....	.136	.036	.026	.116*	....	....	....
29	Bicycles/Pop 1940	....	-.273	-.369	....	....	-.409	-.187	....	....	....	-.004	.082*	....	-.168	.134
30	Bicycles/Pop 1960	-.059	-.098	-.209	....	-.148	-.241	....	....	-.224	-.291	.217	-.168*	....	....	....
31	Bicycles/Pop 1960-1940	....	-.067	-.151	....	....	-.225	-.025	....	....	....	.222	-.152*	....	.044	.459
32	Autos/Pop 1940	-.583	-.623	-.520	....	-.554	-.582	-.481	....	.328	.409	-.202	.444*	....	-.094	-.230
33	Autos/Pop 1960	-.626	-.678	....	....	-.619	-.650	....	....	....	....	....	....	....	....	....
34	Autos/Pop 1960/1939	....	-.041	-.114	....	....	-.116	-.126	....	....	....	.156	-.286*	....	.250	.279
35	Autos/Pop 1960-1940	....	-.407	-.293	....	....	-.428	-.270	....	....	....	.072	-.002*	....	.095	.199
Utility and communication facilities																
36	Elect/Capita 1940	-.369	-.398	-.138	....	-.152	-.134	-.200	....	.383	.501	-.140	.470*	....	-.145	-.348
37	Elect/Capita 1960	-.516	-.557	....	....	-.378	-.425	....	....	.365	.526	....	....	....	....	....
38	Elect/Capita 1960-1940	....	-.529	-.379	....	....	-.450	-.405	....	....	....	-.307	.423*	....	-.110	-.252
39	Movies/Pop 1940	-.542	-.585	-.675	....	-.613	-.704	-.440	....	.089	-.053	-.076	.220*	....	-.113	-.015
40	Movies/Pop 1960	-.546	-.452	-.346	....	-.477	-.452	....	....	.457	.408	-.082	.189*	....	....	....
41	Movies/Pop 1960-1940	....	-.020	.197	....	....	.133	-.009	....	....	....	-.088	.085*	....	.043	-.161
42	Library Use 1940	-.334	-.205	-.203	....	-.096	-.195	-.090	....	.304	.237	-.151	.442*	....	-.231	-.180
43	Running Water 1960	-.446	-.201	-.173	....	-.283	-.244	....	....	.601	.372	-.225	.316*	....	....	....
44	Radio 1960	-.704	-.713	-.613	....	-.671	-.709	-.545	....	.527	.554	-.243	.348*	....	-.070	-.056

		Age Grade Progress							in School 1963							
		Males				Females				Pass Rates		Schools Incomplete				
		Age 10 Grade 1			Age 12 Grade 3+	Age 10 Grade 1			Age 12 Grade 3+	Grade 2 1960		1942		1960	1942-1960	
		Urban	Rural	R-U	Rural	Urban	Rural	R-U	Rural	Urban	Rural	Urban	Rural*	Total	Urban	Rural
	Variable Number	347	348	349	353	359	360	361	365	376	377	389	390	395	396	397
Marriage and fertility rates																
45	Single F 20-24 1960	-.432	-.227	-.110	.276	-.233	-.207	-.056	.275	.494	.580	-.229	.335*	-.343	-.088	-.080
46	F under 5 Yrs/F 1940	.272	.081	....	....	.015	.120	....	....	....	....	....	....	....	....	....
47	F under 5 Yrs/F 1960	-.064	-.156	-.236	.064	-.250	-.262	-.143	.108	-.066	.063	-.028	-.043*	-.061	.212	.172
Employment of Youth																
62	Employ 8-11 M 1960	.731	.780	.629	-.704	.747	.774	.586	-.713	-.317	-.330	.241	-.359*	.532	-.055	.068
63	Employ 8-11 F 1960	.551	.665	.529	-.496	.566	.645	.521	-.519	-.258	-.365	.159	-.385*	.668	-.170	.016
Labor force participation																
58	EcAct F 10+ 1940	-.380	-.131	-.066	.244	-.279	-.208	.071	.271	.466	.151	-.025	.165*	-.444	-.048	.089
59	EcAct F 12+ 1960	-.394	-.254	-.164	.425	-.363	-.268	-.092	.458	.254	.060	-.264	.428*	-.330	-.107	-.130
60	EcAct F 1960-1940	-.149	-.259	-.134	....	-.156	-.097	-.262	....	-.051	-.021	-.211	.394*	....	-.064	-.338
61	Devel. Index 1950	-.653	-.636	....	....	-.614	-.663	....	....	.333	.342	....	....	....	....	....
White collar and professional workers																
64	Collar/EcAct M 1940	-.608	-.643	-.640	....	-.670	-.736	-.484	....	.240	.154	-.016	.167*	....	-.032	.041
65	Collar/EcAct M 1960	-.567	-.591	....	....	-.620	-.643	....	....	....	....	....	....*	....	....	....
66	Collar/EcAct M 1960-1940	-.408	-.398	-.326	....	-.420	-.404	-.291	....	.393	.367	-.059	.087*	....	-.066	-.022
67	Collar/EcAct F 1940	-.683	-.722	-.699	....	-.765	-.795	-.556	....	....	....	-.246	.284*	....	-.080	-.046
68	Collar/EcAct F 1960	-.656	-.568	....	....	-.633	-.603	....	....	....	....	....	....	....	....	....
69	Collar/EcAct F 1960-1940	.244	.418	.505	....	.402	.489	.410	....	.286	.163	.225	-.152*	....	.160	.090
70	Clerk/EcAct T 1960	-.658	-.611	-.577	....	-.741	-.704	-.420	....	.294	.208	-.101	-.146*	....	-.049	.014
71	Clerk/EcAct M 1960	-.637	-.608	....	....	-.725	-.701	....	....	....	....	....	....	....	....	....
72	Clerk/EcAct F 1960	-.685	-.597	....	....	-.756	-.689	....	....	....	....	....	....	....	....	....
73	Prof/EcAct T 1960	....	....	....	....	....	....	....	....	....	....	....	....*	....	....	....
74	Prof/EcAct M 1960	-.569	-.574	-.459	....	-.655	-.604	....	....	.299	.254	-.059	.187	....	....	....
75	Prof/EcAct F 1960	-.557	-.544	....	....	-.470	-.582	....	....	.279	.433	....	....	....	....	....

		Age Grade Progress							in School 1963							
		Males				Females				Pass Rates		Schools Incomplete				
		Age 10 Grade 1			Age 12 Grade 3+	Age 10 Grade 1			Age 12 Grade 3+	Grade 2 1960		1942		1960	1942-1960	
		Urban	Rural	R-U	Rural	Urban	Rural	R-U	Rural	Urban	Rural	Urban	Rural*	Total	Urban	Rural
	Variable Number	347	348	349	353	359	360	361	365	376	377	389	390	395	396	397
Public administration																
77	P.A./Unskt M 1940	-.441	-.537	-.585	....	-.541	-.634	....	....	.051	-.040	.044	.137*	....	....	....
Agriculture																
79	Ag/Unskt M 1940*	-.670*	-.660*	-.628*	....	-.620*	-.717*	-.469*	....	.382*	.379*	-.129*	.323**	....	-.164*	-.061*
80	Ag/Unskt M 1960*	-.605*	-.652*	-.609*	....	-.606*	-.692*	-.504*	....	.365*	.372*	-.103*	.256*	....	-.117*	-.020*
81	Ag/Unskt M 1960-1940	.074	.208	.224	....	.191	.208	.247	....	-.122	-.155	.134	-.040*	....	.000	.002
82	Ejidos/Ag Pop 1940	-.033	-.194	-.175	....	-.031	-.190	-.233	....	-.249	-.112	.441	-.127*	....	.105	.319
83	Ag Labor/Ag M 1940	-.051	.251	.230	....	-.041	.136	.401	....	.308	.340	.012	-.066*	....	.074	.216
84	Ag Labor/Ag M 1960	-.391	-.279	-.086	....	-.296	-.238	-.113	....	.512	.530	-.086	.352*	....	-.004	-.062
85	Ag Prop/Ag M 1940	-.124	-.127	-.134	....	-.123	-.124	-.105	....	.064	-.152	-.522	.246*	....	-.463	-.387
86	Ag Prop/Ag M 1960	.368	.265	.062	....	.267	.201	.086	....	-.510	-.534	.089	-.335*	....	.002	.068
87	Ag Prop/Ag M 1960-1940	.378	.272	.102	....	.278	.216	.124	....	-.477	-.362	.348	-.423*	....	.225	.273
88	Equip/Land 1950	-.456	-.369	....	....	-.318	-.299	....	....	....	....	....	....	....	....	....
89	Farm Mechanized	-.698	-.529	-.545	....	-.725	-.663	-.279	....	.396	.392	-.197	.312*	....	-.043	.051
91	Ag Inc under $500 1960*	-.655*	-.577*	-.513*	.481*	-.684*	-.630*	-.377*	.532*	.348*	.293*	-.297*	.305**	-.543*	-.077*	-.057*
94	Returns Olick 1950-1930	-.497	.453	-.450	....	-.677	-.572	-.287	....	.194	.061	-.175	.156*	....	.075	.023
Manufacturing and mining																
96	Mfg/Unskt M 1940	-.404	-.361	....	....	-.252	-.374	....	....	.....	....	....	....	....	....	....
97	Mfg/Unskt M 1960	-.389	-.423	....	....	-.364	-.408	....	....	....	....	....	....	....	....	....
98	Mfg/Unskt M 1960-1940	....	-.316	-.220	....	....	-.250	-.318	....	....	....	-.208	.276*	....	-.091	-.324
100	Mfg F/M+F Mfg 1940	.163	.532	....	....	.176	.455	....	....	....	....	....	....	....	....	....
101	Mfg F/M+F Mfg 1960	.319	.547	....	....	.440	.537	....	....	....	....	....	....	....	....	....
103	Mfg Inc under $500 1960	.659	.650	.491	....	.748	.654	....	....	-.284	-.296	.183	-.274*	....	....	....

		Age Grade Progress in School 1963														
		Males				Females				Pass Rates		Schools Incomplete				
		Age 10 Grade 1			Age 12 Grade 3+	Age 10 Grade 1			Age 12 Grade 3+	Grade 2 1960		1942		1960	1942-1960	
		Urban	Rural	R-U	Rural	Urban	Rural	R-U	Rural	Urban	Rural	Urban	Rural*	Total	Urban	Rural
	Variable Number	347	348	349	353	359	360	361	365	376	377	389	390	395	396	397
105	Pay/Emp Fact 1930	-.448	-.605	....	....	-.450	-.521	....	....	.134	.185	....	....	....	....	....
106	Pay/Emp Fact 1940	-.372	-.250	....	....	-.377	-.261	....	....	....	....	....	....	....	....	....
107	Pay/Emp Fact 1950	-.361	-.425	-.261	....	-.297	-.293	....	....	.320	.435	-.276	.468*	....	....	....
108	Pay/Emp Fact 1955	-.165	-.371	....	....	-.159	-.298	....	....	....	....	....	....	....	....	....
109	Pay/Emp Fact 1955/1940	....	-.179	-.233	....	....	-.107	-.221	....	....	....	-.147	.533*	....	-.096	-.217
111	Mining/Extct M 1940	-.397	-.280	....	....	-.325	-.228	....	....	.266	.470	....	....	....	....	....
Cultural characteristics																
	Proportions of pop walking barefoot															
125	Barefoot M 1940	.534	.366	.453	-.346	.492	.523	.167	-.352	-.476	-.536	.276	-.381*	.677	-.028	-.003
128	Barefoot F 1940	....	.416	.480	....	....	.571	.194	....	....	-.503	.280	-.354*	....	.011	.006
127	Barefoot M 1960	.509	.455	.502	-.293	.530	.546	.309	.274	-.318	-.466	.230	-.324*	.598	-.043	.024
130	Barefoot F 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
123	Barefoot Urban T 1960	.337	.215	.236	....	.442	.343	.076	....	-.059	-.229	.073	-.061*	....	-.150	-.121
124	Barefoot Rural T 1960	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
131	Barefoot M/F 1940	-.399	-.283	-.204	....	-.394	-.297	....	....	.149	-.047	-.078	-.052*	....	....	....
132	Barefoot M/F 1960	-.575	-.327	....	....	-.526	-.494	....	....	.448	.349	....	....	....	....	....
135	Barefoot M 1940-1960	.483	.258	.267	....	.401	.365	.056	....	-.487	-.561	.217	-.359*	....	-.079	.030
138	Barefoot F 1940-1960	.570	.294	.320	....	.506	.439	.052	....	-.537	-.549	.194	-.194*	....	-.010	-.022
113	Non-Catholic T 1940	.032	-.239	-.266	....	-.255	-.267	....	....	-.259	-.302	.170	-.241*	....	....	....
114	Non-Catholic T 1960	-.077	-.302	....	....	-.296	-.360	....	....	-.086	-.290	....	....	....	....	....
43	Running Water 1960	-.446	-.201	-.173	....	-.283	-.244	....	....	.601	.372	-.225	.316*	....	....	....
115	Sleep on Floor T 1940	.076	.166	....	....	.223	.275	....	....	.223	.380	....	....	....	....	....
116	Sleep on Bed T 1940*	.589*	.435*	.382*	....	.567*	.480*	....	....	-.517*	-.519*	.463*	-.430**	....	....	....
117	Non-wheat T 1940*	-.471*	-.433*	-.306*	....	-.446*	-.506*	....	....	.247*	-.010*	-.162*	.177**	....	....	....
119	Non-wheat T 1960	.422	.471	....	....	.503	.478	....	....	-.091	.106	....	....	....	....	....
122	Non-wheat T 1940-1960	.182	.099	.251	....	.009	.212	.013	....	-.198	-.080	-.088	-.070*	....	.196	-.047

APPENDIX C

PARAMETERS OF REGRESSION EQUATIONS

PARAMETERS OF REGRESSION EQUATIONS

Equation Numbers	R^2	F	Standardized B Values for Each Independent Variable			
Set 1. Dependent variable: Enrollment 1937 Y (265)						
(1.1)	.688	19.87	$-.8300_{X79}$	$.8784_{X64}$	$.6430_{X145}$	.....
(1.2)	.607	21.63	1.3197_{X64}	$-.6824_{X79}$	.....	.....
(1.3)	.605	13.77	$.9403_{X145}$	$-.4977_{X79}$	$.2629_{X39}$	.....
(1.4)	.580	19.36	1.0729_{X145}	$-.4105_{X79}$	.....	.....
(1.5)	.705	15.51	$-.8130_{X79}$	$.9789_{X146}$	$.7314_{X64}$	$.2831_{X125}$
(1.6)	.691	14.55	1.4392_{X146}	$.4675_{X125}$	$.2392_{X46}$	$-.3313_{X79}$
(1.7)	.668	13.09	1.3972_{X146}	$.5229_{X125}$	$-.5363_{X79}$	$.2291_{X39}$
(1.8)	.649	16.67	1.5452_{X146}	$.5782_{X125}$	$-.4536_{X79}$	.....
(1.9)	.619	14.62	1.0339_{X146}	$.3371_{X46}$	$-.2511_{X79}$	.....
(1.10)	.596	20.66	1.1368_{X146}	$.5552_{X125}$	.....	.....
(1.11)	.527	15.62	1.0496_{X146}	$-.4124_{X79}$	.....	.....
Set 2. Dependent variable: Enrollment 1960 Y (266), expressed as log (1000-10Z)						
(2.1)	.536	10.39	$.7387_{X127}$	$-.6914_{X148}$	$-.5226_{X65}$	.....
(2.2)	.522	15.30	$-.9586_{X147}$	$.4926_{X127}$	.....	.....
(2.3)	.508	9.31	$.6737_{X127}$	$-.7181_{X148}$	$-.4317_{X80}$	.....
(2.4)	.380	8.58	$-.7493_{X80}$	$.2975_{X127}$	.....	.....

Set 3. Dependent variable:
Urban enrollment 1960 (273)

(3.1)	.473	12.57	-1.0563X_{176}	-.8055X_{127}	.....	.....
(3.2)	.264	5.02	.6806X_{168}	-.4502X_{127}	.....	.....
(3.3)	.408	9.64	- .7531X_{176}	-.5521X_{12}	.....	.....
(3.4)	.322	6.66	.6650X_{168}	-.5021X_{12}	.....	.....
(3.5)	.441	7.09	-1.1816X_{103}	.6531X_{17}	-.3843X_{65}	.....
(3.6)	.289	3.67	- .8027X_{103}	-.5572X_{65}	.2150X_{45}	.....
(3.7)	.248	4.63	- .7542X_{103}	-.4551X_{65}	.....	.....
(3.8)	.196	3.42	.3799X_{168}	.2189X_{59}	.....	.....
(3.9)	.181	3.09	.5474X_{168}	-.2420X_{65}	.....	.....
(3.10)	.187	2.06	- .3207X_{62}	.2558X_{9}	-.2180X_{127}	.....
(3.11)	.152	2.52	.2488X_{9}	-.2221X_{62}	.....	.....
(3.12)	.131	2.11	- .2844X_{62}	.1803X_{59}	.....	.....
(3.13)	.141	2.30	.3025X_{9}	.1793X_{59}	.....	.....
(3.14)	.130	2.10	- .4115X_{62}	-.2013X_{127}	.....	.....

Set 4. Dependent variable:
Rural enrollment 1960 (274)

(4.1)	.520	15.17	- .8121X_{62}	-.5016X_{127}	.....	.....
(4.2)	.389	8.92	- .7825X_{62}	-.3278X_{91}	.....	.....
(4.3)	.376	8.42	- .7862X_{62}	-.3087X_{192}	.....	.....
(4.4)	.360	7.87	- .7431X_{62}	-.2512X_{44}	.....	.....
(4.5)	.353	7.65	- .6374X_{62}	-.1773X_{9}	.....	.....
(4.6)	.404	9.48	.7186X_{184}	-.4653X_{127}	.....	.....
(4.7)	.232	4.23	.6854X_{192}	-.6121X_{127}	.....	.....

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ABSTRACT

The reduction of social distances among diverse groups depends upon economic, social and cultural ties binding these groups to each other and to national networks. In many Latin American countries, universal education through a free public school system was held to be an indispensible vehicle for achieving integration on a national level. This research takes a case in point, that of Mexico, and asks two main types of questions concerning the relationships between education, economic development and social change.

First, literacy and schooling levels of adults are studied as part of what makes for a viable development process. Interest is in the stages by which an industrializing economy may move from an increasingly literate labor force on, at lead points, to progressively higher levels of schooling of larger proportions of the population. Second, attention is directed to the process of widening distributions of literacy and schooling. The problem is one of identifying components of a development nexus such that development potential can be spotted outside of the clearly advanced areas, and an analysis can be made of the flows of influence between the modernized and traditional sectors. In this orientation education is viewed as an innovation; its distribution among the population and its relationship to development are analyzed as a process of diffusion in both spatial and time dimensions.